Beat-mixing Rock Music:

Rock and Electronic Dance Music merge to create the *Manarays*

Adrian Dominic Carroll

A submission presented in partial
fulfilment of the requirements of the
Queensland Institute of Technology for
the Master of Arts degree

Music and Sound Discipline
Creative Industries Faculty
Queensland University of Technology
Brisbane Australia
2012

"I know my music-—both Rock and Dance—and I have not heard anything of this kind."

(DJ Tim Whiteman, personal communication, January 13, 2012)

Abstract

Rock music has generally employed a static pop music song structure. Electronic Dance Music (EDM) on the other hand through beat-mixing has created an extended structure. The purpose of this research is to explore the proposition that EDM's beat-mixing function can be implemented to create immediacy in Rock music. The term used in this thesis to refer to the application of beat-mixing in Rock music is 'ClubRock'. Through collaboration between a number of DJs and Rock music professionals the research applied the process of beat-mixing to blend Rock tracks to produce a continuous ClubRock set. The outcome is the album the *Manarays—Get Lucky*. DJ techniques created immediacy in the recordings and transformed static renditions into a fluid creative work. The following research questions provided the means of investigation and the opportunity to validate the effectiveness of the album: How can Rock music implement EDM's structural fluidity to create an album in the form of a DJ set? How do Rock audiences read the ClubRock set as a Rock album? The inclusion of rhythmic sections at the beginning and end of each song created a 'DJ friendly' environment to beat-mix the album. Song structure changed as a result of beat-mixing the album and this divergent structure included the addition of the EDM breakdown to the Rock composition. Transformational learning resulted from the phenomenological study which investigated tempi, vari-speed, beat-mixing and breakdowns in a new context. The hybridisation of the two genres, EDM and Rock, resulted in a contribution to Rock music compositional approaches and the production of a unique Rock album.

.

Contents

Appendices

Figures and Tables

Collaborators

Alan Dyer: DJ – Interviewee

Alex Smith: Audio professional – interviewee, in-text contributor

Ben Ricketts: Teacher – proof reader, external auditor

Chris Fletcher: Rock musician – member of the *Manarays*, composer, vocalist, interviewee

Clinton Bell: Audio engineer – audio engineer

Dan Sugars: Drummer – member of the *Manarays*, peer reviewer

David Kershaw: Keyboardist – member of the *Manarays*

Dominic McGlinn: DOMC mastering – mastering engineer

Dr Colin Webber: Music technology lecturer – peer reviewer

Dr Daniel Mafé: Academic – external auditor

Edith Burrows: Teacher – proof reader

Everett True: Music critic – peer reviewer

Ian Taylor: Audio engineer – peer reviewer, interviewee

Jet Carroll: Artist – creator of original artwork

Josh Jett: Professional DJ – peer reviewer, interviewee

Justine Johnson: Musician – vocalist

Kenya Carroll: Artist – illustration designer, cover designer

Maxine McCabe: Audio engineer – proof reader

Monique Davison: Professional DJ – peer reviewer, interviewee

Nino Live: Professional DJ – interviewee

Ommy Butler: Musician – remix engineer

Rita Carroll: Teacher – proof reader

Phil Dunlea: Bassist – member of the *Manarays*

Simon Faulkner: Rock vocalist – member of the *Manarays*

Tim Whiteman: Audio engineer – co-researcher, audio engineer, DJ, in-text contributor

Supervision

Principal Supervisor: Associate Professor Mike Howlett

Associate Supervisor: Dr Andy Brader

Definitions

Beatmatching

The adjustment of "the speeds of two different records so they match and their beats are synchronized" (Broughton and Brewster 2003, 280).

Beat-mixing

The process of cross-fading to blend one track to the next while DJing.

BPM

The tempo of a particular song measured in beats per minute.

Break

"… part of a song that features a thinning of the musical texture, with strong emphasis on the rhythmic elements. Breaks are often chosen by DJs to mix with a second record or to peak a dance floor. Also referred to as *breakdown*" (Fikentscher 2000, 135).

Electronic Dance Music

"The term 'Electronic Dance Music,' or 'EDM,' encompasses a broad range of music produced during the last two decades, including styles such as techno, house, drum 'n' bass, and trance. Although fans of EDM are very much aware of the differences between these types of music, they still view them as belonging to the same overall category" (Butler 2006, 6).

Mix-break

The mix-break entails the inclusion of long intros and outros of percussion to give the DJ time to beatmatch and segué into the next track.

Loop

A musical phrase either sampled or played repeatedly.

Pitch-lock

Pitch-lock is digital processing that enables the change of tempo or BPM of a track while retaining the original pitch.

Rock Music

Rock music in this study is derived from classic Rock exemplified by bands such as AC/DC, Cream, Led Zeppelin, The Who, The Easybeats and Zoot. Later examples include bands from the Punk and the Grunge scenes.

Traktor

Traktor is a DJ software programme that allows the manipulation of music with third party controllers and the storage of this music onto hard drive.

Trance Music

A sub-genre of EDM usually in a tempo range of 137-145 BPM.

1.0 Introduction

> *When a musical piece is too simple we tend not to like it, finding it trivial. When it is too complex, we tend not to like it, finding it unpredictable—we don't perceive it to be grounded in anything familiar. Music, or any art form for that matter, has to strike the right balance between simplicity and complexity in order for us to like it. Simplicity and complexity relate to familiarity, and familiarity is just another word for schema* (Levitin 2006, 229).

This research project proposes that the application of mixing techniques and structures in Electronic Dance Music (EDM) can enhance originality in Rock music by forming divergent song formats. In this project EDM techniques—specifically beat-mixing and breakdowns—are implemented in Rock music to extend the standard album and single formats. The beat-mixing technique from EDM has been deployed to combine original Rock tracks and thereby form a continuous DJ set. I have devised the term 'ClubRock' to denote the alteration that allows Rock music to acquire immediacy through beat-mixing. The creative output is a Rock album called *Get Lucky* performed by Rock musicians as the *Manarays* and subsequently mixed by DJs to represent the work in a new musical form—the ClubRock set. ClubRock retains the Rock aesthetic and is *not* Rock music with a dance beat.

1.1 Rock structure

One motivation for this research project came from an experience in the studio: While recording a cover version of *Loose* (The Stooges 1970) with a band called Vocal Lizard I mistakenly recorded thirty-six bars for my guitar solo instead of the usual twelve or sixteen bars. This error turned to the recording's advantage when the non-traditional solo length built excitement—this became the main contributor to the effectiveness of the track. Even a small break from the traditional rock structure made a significant difference to the perceived originality of the recording. This serendipitous event led to questioning the three-and-a-half minute or 'radio-friendly' format and the need to develop a differentiated form. As a composer I became frustrated by the application of predetermined song formulae.

Hit songs are composed using a limited variety of song structures (Blume 1999) and the following example is the most common: “Verse | Bridge | Chorus | Verse | Bridge | Chorus | Middle 8 | Chorus repeated to fade” (Howlett 2009, 45). The replication of this standard song structure contributes to the situation where popular songs can appear to be stereotyped.

Song structure in popular music is tied to the history of music replication and is influenced by the manufacturing requirements of the 10” 78 RPM shellac and 7” 45 RPM vinyl disc formats. The typical song duration of around three and a half minutes was necessary before playback volume and quality was compromised (Chanan 1995). “The introduction of the 12-inch single in 1975 made that year important for the development of dance music. The pop song format was from then on expanded, initially through the addition of longer introductions, and the insertion of long instrumental sections called ‘breaks’” (Fikentscher 2000, 89). This constraint on composition was further removed by the advent of the compact disc with a capacity of 74 to 80 minutes. EDM’s extended musical structure has been facilitated by this expanded capacity.

1.2 EDM structural fluidity

“Although [EDM] tracks do contain passages that allow for the release of energy, the music flows continuously, never stopping for a moment of rest” (Butler 2006, 184). EDM’s ability to mix tracks together sequentially for an extended period of time is a key component in generating this fluidity, and came about through the manipulation of recorded tracks by producers. “Reggae made an artist and a star of the producer, it made records into live performances” (Brewster 2000, 121). Importantly EDM also has this capacity of producing not simply individual recordings but also a medium to create new soundtracks by live manipulation of these recordings. This immediacy in Dance music is contrasted by recorded Rock music continuing to be presented in a static form.

Rock music can also utilise EDM techniques to create structural fluidity and thereby generate immediacy and spontaneity in the replay of recorded works through the creative combination of tracks. This immediacy in mediated Rock music is demonstrated in the album *Get Lucky*.

1.3 Exegesis

This exegesis reports on the outcomes achieved by applying EDM processes to Rock music and summarises the production process. The thesis is presented and discussed in the following manner. Firstly, it conveys the researcher's context of inquiry and the relevant literature pertaining to EDM and Rock music. Secondly, the research methodology of phenomenology and heuristic enquiry is discussed. Thirdly, the method of research and the manner of collecting and analysing the data is explained. Fourthly, the research data is presented and analysed. Finally the findings are summarised.

A number of Appendices are provided to help the discussion. Appendix 1 is a detailed representation of the song structures appearing on the album. Appendix 2 elaborates on the methodology of heuristic enquiry. Appendix 3 displays the Trance format which was used as a template to create ClubRock. Appendix 4 documents the complete process of producing ClubRock and will be relevant for practitioners wanting to further the research.

2.0 Context

> *Before a critical meaning or significance for a practice-led research project can be identified, a range of pertinent critical contexts must be clearly named and claimed. It is only when the practical is located within critical contexts that findings can begin to be established* (Smith and Dean 2009, 59-65).

Critical contexts position my praxis within the research and give the listener a greater understanding of the creative work. The first critical context will introduce my personal musical background and define the specific sub-genre. My professional experience in relation to the study is then outlined. The technical approach utilised to complete the project is identified. Finally a statement is made on the audio context in which the research should be experienced and evaluated.

2.1 Personal background

Levitin states that music listened to at the age of fourteen has the most influence and that "part of the reason we remember songs from our teen years is because those years were times of self-discovery, and as a consequence, they were emotionally charged; in general we tend to remember things that have an emotional component" (2006, 225). In 1977 I was fourteen and influenced by the international and local Power-Pop and Punk movements. One defining moment was the release of the Sex Pistols' *God Save the Queen*. "Their music had genuine anger and fire and Rotten had genuine magnetism. As he spat out *God Save The Queen* or its follow-up *Pretty Vacant* there was so much refreshing energy and charge, so much tension and volcanic dynamism that you could not fail to be impressed, even excited, perhaps refreshed, by it" (Pascall 1978, 217). *Never Mind the Bollocks* seemed to carry weight—a power conveyed in the sound of the songs as much as the compositions. From this point in time the sound of the recording was as important to me as the song itself. I then discovered two Detroit Rock bands—MC5 and The Stooges—and this led to The Sonic's Rendezvous Band who featured MC5 guitarist Fred 'Sonic' Smith. The influence of The Sonic's Rendezvous Band is significant and is exemplified in this research project's composition *The Most Kissable Lips* inspired by The Sonic's Rendezvous Band's song *Electrophonic Tonic*. The influence is confirmed by the inclusion of a cover version of their song *Asteroid B-612*.

2.2 Professional background

In Sydney in 1987, I joined a band called the Splatterheads and toured from Adelaide to Brisbane playing my own compositions. After releasing two albums— *Filthy Mile* followed by *Ink of a Mad Man's Pen* —I left to concentrate on studio production. Subsequently the Splatterheads released *Bot* and went on to reach audiences internationally. The Encyclopedia of Australian Rock and Pop describes the band as "having much in common with other Sydney hardcore bands like The Hard-Ons, Massappeal and The Hellmenn, and their Brisbane counterparts The Insane Hombres, Splatterheads sprayed out a raucous brand of street-level punk rock'n'roll" (McFarlane 1999, 595). I continue to write with Chris Fletcher from the Splatterheads and the compositions on the album *Get Lucky* are a product of this collaboration. The album also features the Splatterheads' dual vocals of Chris Fletcher and Simon Faulkner. I am currently actively engaged in other Rock composition and performance, writing and playing regularly in a Brisbane Punk band—The Boondall Boys.

A contributing factor to the research is my thirty years experience as a recording engineer and producer including independent record production, radio imaging, commercial production, classical recording and international lecturing and voice-over production. I have an analogue tape background but currently record and rearrange Rock songs using Pro Tools, a professional-standard digital audio workstation (DAW). On this project I functioned as a composer and was also involved in the production process, utilising recording as a medium for praxis. This background outlined above has given me the technical and creative skills required to undertake this investigation.

2.3 Technical approach

Pro Tools digital technology was utilised for recording and mixing the album. The digital medium also provided the capability to increase the tempo without altering the pitch or key of the song. This process of tempo adjustment became an important part of the research and findings. Although traditional EDM practice is to use vinyl DJ techniques, these have *not* been represented in this investigation. Vinyl records have excellent sound quality, and the tactile dexterity required to manipulate the medium adds to the atmosphere and sonic output of the live set. However digital controllers and computer programs are replacing vinyl (Miller, Vandome and McBrewster 2009) and using digital technology avoided the expense and time constraints associated with pressing vinyl records.

2.4 Audio context

The last critical context is that *Get Lucky* is a Rock album designed for *listening*. As Brewster notes, "the time scale and the momentum of any physical activity is vastly different from the attention span of listening" (2000, 174). The research has incorporated EDM transitional techniques to create a *sound* and an aesthetic unique in a Rock album and should not be confused with the concept of being applicable to the dance experience of the Rock discothèque. Other critical contexts will be disclosed through the literature and contextual review.

3.0 Literature and Contextual Review

The literature offers important ideologies and constructs that frame this research. It also provides support for the research and develops the contextual understanding of the study. This literature review introduces issues related to compositional structure—sometimes referred to as the form or the format of a song. It explores the history of Jamaican dancehall tradition and EDM production techniques that frame the research. The literature review then addresses the DJ techniques used in the research in a historical context. How Rock moved away from danceable forms and how Rock music has been advantaged by EDM culture in the past is discussed. Rock music is then considered in the context of EDM and the gap in the field of research is identified and specifically addressed.

3.1 Compositional structure

The song format of around three-and-a-half minutes in length imposed by the physical constraints of shellac and vinyl records is advantageous for radio programming. Social commentator Albert Goldman states that "the three minute pop tune was designed to be perfect for radio... [whereas] the dancer wants to get in a groove and stay there until he has exhausted his invention or his body" (cited in Brewster 2000, 174). What is questioned here is not the effectiveness but the predominance of specific prescribed ways to present a song and the value in creative adaptation of representation. In talking of Rock format Theodore Gracyk in his book 'Rhythm and Noise' notes that "we simply tire of our minor variations of the same old thing" (1996, 206). Gracyk and others (e.g. Durant 1985, Blume 1999 et al.) support the premise that most Rock music still remains fixed into a format designed for optimum radio playability. While acknowledging many notable exceptions Blume states that "whether we're conscious of it or not, we've been trained by years of listening to the radio to expect one of the forms I've listed, or something close" (1999, 4). Changing this expected format and creating a Rock track that allows the structure to be modified artistically on playback is a principal aim of this project.

3.2 Jamaican dancehall tradition and EDM production techniques

Kai Fikentscher, in his book, '"You Better Work!" Underground Dance Music in New York City', gives an insight into the development of underground Dance culture from the roots of disco from the late 1960's to the turn of the century. Fikentscher defines mediated music as "musical sound being reproduced independent of the conditions of its initial production" and differentiates this from musical immediacy, sometimes referred to as 'live' or music created spontaneously (2000, 15). In the case of Dance music, musical immediacy and mediated music coexist (2000). This enables EDM recordings to be more than just a fixed representation of a song—a recording becomes a component of a new work when it encounters the dance floor, creating new life and endless possibilities. Davis Troop explains "this idea of a seamless flow of music that ran all night created by a DJ... came from disco", and this has been "one of the most radical changes of music in the last thirty years" (cited in Shapiro and Lee 2000, 38). This radical change is not just manifest in the representation of a seamless flow but in the techniques that enable this seamless flow. Shapiro states that "with the exception of Punk Rock, every significant development in popular music since the 1960's has in one way or another emerged from the Jamaican dancehall and its tradition of the sound system" (2000, 50). It was in Jamaica that a record stopped being a finished recording. Instead, in the studio it became a matrix of sonic possibilities, the raw material for endless 'dubs' (Brewster 2000, 109). "With a deejay 'riding the riddim' the audience was hearing something absolutely unique; with much the same immediacy as a traditional live performance" (2000, 118). "Soon enough, studio engineers began to play around with the instruments by reducing the tracks to their basslines and rhythms or by foregrounding certain instruments in the mix, thus laying the foundation for the remix culture" (Shapiro and Lee 2000, 51).

"Reggae has nourished the dance culture to an extraordinary degree. It's in the conceptualization of what you're supposed to be doing when you make dance music. It's in the practice, it's in technique and it's in the forms that have arisen out of Jamaican music" (Brewster 2000, 122). Talking of pioneer DJ Grandmaster Flash, Brewster states that he "set himself the goal of playing breakbeats with precision—[and] deliver it to the dance floor with a constant, unbroken beat. At first, he had no idea whether it was possible, just that it would be amazing—and that if he could get it right, he would make history" (2000, 214).

EDM adopted processes such as breakdowns, extended forms and beat-mixing from the Jamaican dancehall tradition. Even though not all DJs use the technique, beat-mixing enables the DJ to mix seamlessly from one track to another. The term 'DJ friendly' means that a track is easily mixed by a DJ on the dance floor, but not all dance music complies (Snoman 2004, 49). Making a track DJ friendly entails the inclusion of long intros and outros of percussion to give the DJ time to beatmatch and segué into the next track. One advantage of the DJ friendly approach is that it saves a lot of time in rehearsal and pre-performance editing. This project incorporates mix-breaks and other compositional and studio practices to implement structural innovations in Rock music.

The EDM structural model used in ClubRock came initially from Trance. In Rick Snoman's book 'The Dance Music Manual' (2004, 49-51) the Trance track is broken down into a generic format (see Appendix 3). This was used as an indicative format for ClubRock and adapted for the project. Snoman did not write 'The Dance Music Manual' as a hybridisation manual but it was useful for that purpose and offered advice in the production of EDM. Other valuable resources in EDM production technique are Broughton and Brewster (2003), Webber (2008), Verderosa (2002), Brown (2000) and Adamo (2010).

This project also utilises bar length variation as another contributing factor to uniqueness. Shapiro observes that "a cut like Dinosaur L's *Go Bang* is fantastic because you don't know when the breaks are going to come... instead of everything happening on the four, the track shoots off in twos, threes, fives and sevens" (2000, 81). Brewster confirms that "the best disco music is full of changes and breaks, which allow for several shifts in mood or pace and usually open up long instrumental passages. If the breaks work, it becomes the pivot and anticipated peak of the song" (2000, 175). Brewster (2000) went on to state that *Girl You Need a Change of Mind* by Eddie Kendricks (1973) filled this requirement perfectly. These EDM processes of establishing loops and the addition of changes and breaks have also been applied to create originality in Rock music in this project.

3.3 Rock music and EDM

The subject of Rock music is reviewed here with specific regard to previous instances of the application of EDM techniques. Albin Zak III in 'The Poetics of Rock' discusses studio practices and the aesthetics of the recorded sound. Zak III states that the practice of dropping instruments out unexpectedly in Rock music was derived from Dance and has occurred since the 1980's (2001) and goes on to say "when the bass drops out of a rock track it creates a sense of expectancy" (2001, 193). Shapiro's 'Modulations' (2000) talks of the timelessness in repetition while discussing groove as one of Rock's three most radical aspects. Shapiro states that "'groove' relates to repetition, to the loop, to timelessness - the dream of escaping history by getting back into the body" (2000, 34). At some point after playing a loop repeatedly the audience loses the sense of expectation, and surprise is more easily achieved in composition. These two elements of expectancy and surprise are compositional devices and are interpreted as originality as long as it strikes "the right balance between simplicity and complexity" (Levitin 2006, 229).

Brewster's 'Last Night a DJ Saved My Life: The History of the Disc Jockey' (2000) is a rich resource of theoretical perspectives and discusses Rock music in the context of EDM. Brewster discusses one of Francis Grasso's signature mixes which combines Led Zeppelin's *Whole Lotta Love* with the drum break from Chicago Transit Authorities' *I'm a Man* and is evidence that Rock music is not totally left behind in the club scene. The Dance genre of Northern Soul consumes old rare grooves (fast paced 60s American soul music) that the DJ manipulates to create a Dance set. These records were not composed to be DJ friendly but can be made to blend through the skill of the DJ. Rock music, like Northern Soul, is not made to be DJ friendly and even though DJs are able to mix Rock music the inclusion of mix-breaks would save a lot of time in rehearsal and pre-performance editing as well as extend the possibilities for the DJ. The "general goal of mixing is to move as smoothly as possible from one record to another" (Butler 2006, 242) and beat-mixing is one way the DJs can mix seamlessly in any form of music.

Rock music does not require beat-mixing in order to be presented in a long form, especially in the live music context. In a chapter entitled 'The death of rock' Brewster notes that The Grateful Dead "would play songs as long as they felt good, as long as they made people dance and when most of the audience is high on something, that can be a long time" (2000, 66), but then adds that Rock "abandoned early danceable psychedelic forms" (138). Brewster describes the abandonment as "the age of the concept album, the rock opera, the tortuous guitar solo" and goes on to state that "rock, after a trip too many, would soon drift well away from the dance floor and become serious music, sounds for the head rather than the body" (2000, 70). In the early 70s Rock indulged so pervasively in the extended form that it inspired Punk bands to exclude improvisation and to resort to tight song structures. The Ramones, noted for their very short songs which are predominantly void of instrumental sections, are a very good example. John Covach states that "New wave replaces long songs and extensive instrumental soloing with short, hook-based arrangements" (in Moore 2003, 176). While comparing Yes's *Awaken* with Joe Jackson's *Is She Really Going Out With Him* Moore states that "while Anderson and Rick Wakeman exchange melodic lines on the harp and church organ in a meditative central section, Jackson's spare quartet of bass, drums and piano complete their entire song in about the same length of time" (Moore 2003, 176). In reference to the 80s Kronengold (2008) discusses the introduction of four-on-the-floor into the New Wave genre and cites Blondie's *Atomic* and The Clash's *Lost in the Supermarket* as demonstrating borrowing or exchange. He also asserts that this exchange enabled AOR (Album Orientated Rock) to borrow from disco as well. Queen's *Another One Bites the Dust* and *I Was Made for Loving You* by Kiss are two examples.

Talking of the Manchester Sound Brewster states "after acid house, this sound was seen as a brief resurgence of band-driven music, but it was actually a clever reconstruction of rock to make it palatable to a market that had learned how to dance" and then continues, "rock bowed to the dance revolution" (2000, 137). Following the same argument Brewster observes, "when Beck… embraced dance-derived approaches… rock started to look innovative again" (2000, 359). These examples demonstrate exchange and how Rock music has benefited from Dance music. This exchange is also of interest because although borrowing from Dance music these examples generally succeed in retaining the Rock aesthetic in the performance. The ability to exchange musical ideas and techniques while not compromising the Rock aesthetic is important for ClubRock.

Many Dance producers have incorporated Rock feels and elements creating cross-genre Dance tracks—Fat Boy Slim's album *You've Come a Long Way, Baby* and the Junky XL remix of *A Little Less Conversation* by Elvis Presley (2002) are two commercially and artistically successful examples. Producers have successfully incorporated Rock music into the electronic Dance track but the aim of this study is the converse.

3.4 The gap in the field

The literature gives examples of how Rock has remained fixed in a 'radio friendly' format. It shows how Dance music achieves immediacy in mediated music through the application of Jamaican dancehall ideologies. The idea is also supported that Rock in the 70s went too far in abandoning its early danceable forms and describes how New Wave in the 80s allowed AOR to exchange successfully with Disco. What is not present in the literature nor the contextual review is evidence that the beat-mixing function of EDM has been used to refresh the song structure and enhance originality in Rock music.

3.5 Purpose statement

The purpose of this research is to explore the proposition that EDM's beat-mixing function can be implemented to create immediacy in Rock music. Through collaboration between a number of DJs and Rock music professionals the research applies the process of beat-mixing to Rock tracks to produce a continuous ClubRock set. The following research questions provided the means of investigation and the opportunity to validate the effectiveness of the album: How can Rock music implement EDM's structural fluidity to create an album in the form of a DJ set? How do Rock audiences read the ClubRock set as a Rock album?

The purpose of the research is not to make Dance derived Rock music: ClubRock is not a synthesis of Dance music and Rock music but the project will borrow the Dance music technique of using mix-breaks to join songs together and the use of breakdowns to give relief to the continuous set.

4.0 Conceptual Framework

This section explains the overriding philosophy behind the research. The project applies a practice-based qualitative research methodology that consists of 30% written and 70% practical components. The research is a phenomenological study that turns "the world into a series of representations, including field notes, interviews, conversations, photographs, recordings, and memos to the self... attempting to make sense of, or to interpret, phenomena in terms of the meanings people bring to them" (Denzin and Lincoln 2005, 3). This describes the transformation of my compositional practice into a tangible form of understanding through collecting and reflecting. The project applies a practice-based research methodology and a full understanding can only be realised with direct reference to the research recordings. Linda Candy's definition adds clarity:

> "Practice-based Research is an original investigation undertaken in order to gain new knowledge partly by means of practice and the outcomes of that practice. Claims of originality and contribution to knowledge may be demonstrated through creative outcomes in the form of designs, music, digital media, performances and exhibitions. Whilst the significance and context of the claims are described in words, a full understanding can only be obtained with direct reference to the outcomes" (Candy 2006, 3).

Lichtman states that "a good phenomenological study moves beyond just a description of the experience: it strives to arrive at the essence of the experience" (2011, 77). The essence of the experience is achieved through heuristic inquiry which "epitomizes the phenomenological emphasis on meaning and knowing through personal experience and exemplifies and places at the fore the way in which the researcher is the primary instrument" (Patton 2002, 109). The creative synthesis, in this case the album, will be able to be interpreted by others and will reveal the phenomena experientially to the listener.

Heuristic inquiry is well documented in the research field but a brief summary has been provided in Appendix 2 to support this methodology. The reason for the adoption of the heuristic approach is the emphasis on personal significance, the portrayal of essential meanings, its self-searching opportunities and the knowledge of experience that enriches the understanding of practice. The heuristic method of execution varies in different situations and Douglass and Moustakas have described it as a conceptual framework that does not prescribe a particular method (1985, 42).

5.0 Method

The specific method of data collection to produce the creative synthesis and the validation requirements are now explained. In summary: Alternate song structures were explored by applying the Trance format to Rock compositions and documenting and refining the processes; six songs were recorded—*A Summer's Day, Now It's All Gonna Change, Get Lucky, Asteroid B-612,The Most Kissable Lips* and *Little Jo*. Two research questions were developed to guide the research:

- How can Rock music implement EDM's structural fluidity to create an album in the form of a DJ set?
- How do Rock musicians read the ClubRock set as a Rock album?

5.1 Data

Data took the form of transcripts of over fifty interviews, lecture presentations, compositions, ClubRock sets and field notes. I drew on my personal experience from a written journal that became a rich source of self-reflection. A Lab Book documented the whole process of recording the album (Appendix 4). Individual observations from interviews with the principle co-researchers—DJs and Rock professionals—have been included verbatim to portray the subjective views of the individuals. Some of these observations suggested new formatting approaches and co-researcher's alternative mixes also provided ideas about structure and arrangement that were incorporated into the compositions. Key collaborators who informed the project were Tim Whiteman, an experienced DJ with a Rock background, who gave the project a DJ perspective; Alex Smith, a Rock musician, who demonstrated the manipulation of Rock music in Ableton Live (DAW); and Josh Jett and Nino Live, both professional DJs, who created alternative Rock sets. The creative synthesis of these contributions is represented as the album *Get Lucky*. My roles were producer, composer, engineer and project leader, and as such I was responsible for the final result. Key information was separated and a thematic structure was devised. The themes of tempi, vari-speed, beat-mixing, breakdown and the ClubRock set became apparent. These themes were evaluated and regularly checked for relevance. The themes, data collection tools, data sets and methods of data analysis relevant to each of the research questions are outlined in the Table below.

Research Questions	Themes	Tools/Instruments	Data	Analysis
How can Rock music implement EDM's structural fluidity to create an album in the form of a DJ set?	Tempi Vari-speed Beat-mixing Breakdown	Interviews Collaborative research Composition Lab Book Electronic journal Journal	Interview transcripts Compositions ClubRock set Journal entries Field Notes	Data coding Content analysis Peer review Member checking Reflective practice
How do Rock audiences read the ClubRock set as a Rock album?	ClubRock set	Interviews	Interview transcripts	Data coding Content analysis Peer review Member checking Reflective practice

Table 1: Data collection grouped into themes, tools and analysis.

5.2 Data validation

The guiding principles of validation in this project followed the advice of Moustakas that heuristic research pertains to meaning and, as long as the researcher has rigorously and comprehensively self-searched and portrayed the experience, it is valid (1990). As Polanyi confirms, "certain visions of the truth, having made their appearance, continue to gain strength both by future reflection and additional evidence. These are the claims which may be accepted as final... and for which he may assume responsibility by communicating them in print" (1983, 30).

The validation of the data included the co-researchers reading my written representation of their observations to confirm accuracy. Crystallisation (Richardson in Denzin and Lincoln 2000) has been employed to refine and gather a number of perspectives to validate my own interpretation. Another three validation processes were taken from Creswell (2003):

- The work was presented to non-collaborating professional peers for evaluation.
- External auditors not acquainted with the industry were asked to review the project.
- Negative and contrary information was reported alongside supporting evidence.

6.0 Data Collection

6.1 Recording procedure

As stated previously a full documented report of the recording procedure is contained in the Lab Book (Appendix 4) but some aspects are now summarised to provide insight into the data collection process. In the initial stages the songs were sketched with a rhythm guitar, a vocal and a drum machine using the music software program Cubase. These songs were structured in the form of standard Rock tracks but with the addition of breakdown sections derived from EDM. Lead guitar parts were added and the breakdowns gradually extended as the tracks progressed in response to feedback from co-researchers. The recordings were then transferred to Pro Tools (DAW), which is the digital recording system used in the Gasworks studio where the 'live' recordings were made. The bass player Phil Dunlea and drummer Dan Sugars then performed the rhythm section for each song. These rhythm sections were recorded with both performers playing together which enabled them to interact and develop complementary lines. Once the tracks were recorded the drums were looped and copied onto the beginning and end of each track to form mix-break sections. The addition of these mix-break sections allowed the formation of a continuous ClubRock set through beat-mixing. This was achieved by overlapping the end mix-break section of one track with the beginning mix-break section of the next track. The tracks were tailored to fit into each other perfectly.

As the tracks developed it became apparent that in the context of the ClubRock set the internal song structures benefited by further expansion in a number of sections. During this process song structures expanded as they were assembled and reassembled in response to peer review. Having verified that they could be beat-mixed, the mixes were then given to the collaborating DJs to produce a ClubRock set. This process happened a number of times as documented in Table 2 below. These independently developed DJ sets were incorporated into a final ClubRock set edited together in Pro Tools.

Final Version 19/11/2012	***21/12/2011***	***08/12/2011***	***02/12/2011***	***31/10/11***	***28/10/11***
A Summer's Day BPM 164	*Little Jo* BPM 118	*Little Jo* BPM 128.62	*The Most Kissable Lips* BPM 193	*Little Jo* BPM 129.80	*Little Jo* BPM 129.80
Now It's All Gonna Change BPM 167	*A Summer's Day* BPM 175	*A Summer's Day* BPM 175	*Now It's All Gonna Change* BPM 167	*A Summer's Day* BPM 172	*A Summer's Day* BPM 172
Get Lucky BPM 173	*Now It's All Gonna Change* BPM 175	*Now It's All Gonna Change* BPM 175	*A Summer's Day* BPM 164	*Now It's All Gonna Change* BPM 172	*Now It's All Gonna Change* BPM 172
Asteroid B-612 BPM 185	*Get Lucky* BPM 185	*Asteroid B-612* BPM 185	*Asteroid B-612* BPM 185	*The Most Kissable Lips* BPM 195	*The Most Kissable Lips* BPM 195
The Most Kissable Lips BPM 193	*Asteroid B-612* BPM 185	*Get Lucky* BPM 185	*Little Jo* BPM 118	*Asteroid B-612* BPM 187	*Asteroid B-612* BPM 187
Little Jo BPM 118	*The Most Kissable Lips* BPM 193	*The Most Kissable Lips* BPM 193	*Get Lucky* BPM 173	*Get Lucky* BPM 180	*Get Lucky* BPM 187

24/10/11	***17/10/11***	***15/08/11***	***18/07/11***	***18/07/11B***	***First Version 11/05/11***
Little Jo BPM 129.80	*Little Jo* BPM164	*Little Jo* BPM 127.4	*Little Jo* BPM 164	*Little Jo* BPM 118	*The Most Kissable Lips* BPM 193
A Summer's Day BPM 167	*A Summer's Day* BPM 180	*A Summer's Day* BPM 180	*A Summer's Day* BPM 180	*A Summer's Day* BPM 164	*Now It's All Gonna Change* BPM 167
Now It's All Gonna Change BPM 167	*Now It's All Gonna Change* BPM 180	*Now It's All Gonna Change* BPM 180	*Now It's All Gonna Change* BPM 180	*Now It's All Gonna Change* BPM 167	*A Summer's Day* BPM 164
The Most Kissable Lips BPM 193	*The Most Kissable Lips* BPM 180	*The Most Kissable Lips* BPM 180	*The Most Kissable Lips* BPM 180	*The Most Kissable Lips* BPM 193	*Asteroid B-612* BPM 183
Asteroid B-612 BPM 185	*Asteroid B-612* BPM 180	*The Most Kissable Lips* BPM 193	*Asteroid B-612* BPM 185	*Asteroid B-612* BPM 180	*Little Jo* BPM 118
Get Lucky BPM 185	*Get Lucky* BPM 180	*Get Lucky* BPM 190	*Get Lucky* BPM 173	*Get Lucky* BPM 180	*Get Lucky* BPM 173

Table 2: Change in set order and tempo over the project.

6.2 Phenomenological themes

The *Manarays—Get Lucky* is a creative synthesis of the research gained through the duration of the project. This final product can only be fully understood by examining the phenomenological themes derived from the research. The themes of tempi, vari-speed, beat-mixing, breakdown, and the ClubRock set explain the particular processes in making the album and these will now be discussed individually.

6.2.1 Tempi

The first theme discovered through interview and praxis was the use of tempi in the making of the ClubRock phenomenon. Jett stated that "it's not actually common to beatmatch a Rock album because of the huge difference in speed" (personal communication, December 10, 2011). Beatmatching is the process of matching the tempos of two songs—this is usually done by listening to the second track on headphones. When the two tracks align and are playing in synchronisation, the DJ is able to mix in the new track and fade out the old—this is called beat-mixing. To facilitate beatmatching the DJ would usually select a BPM that is close or identical in tempo. As Whiteman noted, "this enables the DJ to beatmatch the songs fairly easily and one of the problems that I encountered with the tracks was that they are so disparate. The similarity of tempi within EDM genres gives the DJ flexibility to navigate his way through a collection of tracks, without being constrained by disparate tempi. It also allows a different set configuration/order each time the DJ performs the set" (personal communication, January 13, 2012). "Some genres of dance music are defined by BPMs" (Dettmar and Richey 1999, 195) and having similar tempi is a major ontological difference between the EDM and Rock genres. The necessity for a similar tempo for beat-mixing was not initially evident and the tempi recorded were considerably different between the songs (tempi ranged from 118 BPM – 193 BPM). Disparate tempi caused problems beat-mixing the tracks. At first we tried matching the speeds to the fastest track using the process of vari-speed discussed below. This created excitement in the set, however, the speeding up process caused unpleasant audible artefacts. Eventually it was decided to arrange the tracks in order of tempo from slowest to fastest, which also produced continuity and intensity over the length of the album.

To achieve beat-mixing the following process was developed: The speed of the introductory mix-break section of the subsequent track was slowed down to match the tempo of the previous track, but only in the mix-break. The second track was then returned to pitch after the mix-break, usually in an arrhythmic breakdown section.

6.2.2 Vari-speed

In recording terminology the term vari-speed describes the increase or decrease of tempo. In the digital domain it is possible to vari-speed a track without affecting the pitch (pitch-lock). However due to the limitations of the technology unpleasant audio artefacts can be produced. The set initially required a significant amount of vari-speed to beatmatch the tracks and these digital artefacts became a problem. The first attempts at vari-speed produced fast sets that gave the album a significant lift and contributed greatly to the feel and excitement to the initial mixes, however, tempo matching through the use of vari-speed is not demonstrated in the final representation because of the digital artefacts that were present in the recording. This quality degradation was exacerbated by the DJ software (Traktor, Serato) and CD players that operated at a low resolution of 16 bit, 44.1 kHz. DJ software, professional DJ CD players (CDJ 1000 Mk3s) and most Digital Audio Workstations were unsuccessful in being able to pitch-shift Rock music without artefacts. Pro Tools X-form could complete the task without noticeable tonal artefacts but because of the slight timing inconsistencies that result from the time compression it was decided to keep the original tempo of the songs, whilst vari-speeding only the mix-breaks.

As stated previously, in the final stages of the project I slowed down the mix-break of the next track to match the tempo with the previous track for beat-mixing. Artefacts were not a problem in the mix-break because they were masked by another drum mix, and were less noticeable with the less tonal character of drums. Even though I was unable to vari-speed the individual tracks enough to enable them to play at the same speed, I was able to vari-speed the whole set by a small amount on some Rock sets. During the research the practice of speeding up the set by 103% helped pull the feel of the recording together but in the end still compromised the quality and so this was not used in the final set. Dave Robinson (Stiff Records) “was also known to take finished masters of recordings and speed them up to ‘add energy’” (Howlett 2009, 27).

6.2.3 Beat-mixing

When two tracks slowly blend together the resulting combination is identifiably EDM influenced and demonstrates a new possibility in Rock music. Josh Jett stated that the mix-breaks were configured in a "perfect way" (personal communication, December 10, 2011). This was achieved through following these mix rules created by Tim Whiteman (Appendix 4, 71, 85):

- Each mix-break will be one minute long, consisting of 30 seconds of tonality and 30 seconds of drums.
- Mix-break drums need to be 'tight' (well-defined, hard-edged sounds).
- No bass-lines are to be included in the front mix-break.

The value of these mix rules became more apparent as the tracks were tailored to work together and enabled the project to be mixed in any song order. The one-minute mix-break provided a constant predictable work-part so that the DJ knew when to start the next track. The mix-break drums needed to have tight, well-defined, hard-edged sounds so that the DJ could differentiate the tracks when beatmatching. When working with the initial mixes it was sometimes difficult to beatmatch because the sounds were very similar and being acoustic lacked the hard edge of electronic samples. Subsequent mixes were adjusted to improve this quality. Having no bass-line at the front of the mix allowed the drum track to sit over the end of the previous song without a clash in key signature. The amount of bass allowed at the end of the mix-break determined the entry point of the subsequent track.

6.2.3.1 DJ cut

We also found that another DJ technique of cutting between tracks—as opposed to cross-fading—created a faster movement from one track to another and generated excitement. The DJ is capable of transitioning between two tracks at any convenient point when both tracks are running in synchronisation. The cut occurs without missing a beat and results in a sharper and more clearly differentiated transition than a traditional cut edit between tracks of different tempi. This technique is not demonstrated on the final ClubRock set because it did not help demonstrate beat-mixing.

6.2.4 Breakdowns

In EDM there are two kinds of breakdown—one at the beginning of a track for transitioning, and one in the middle for dynamic relief and subsequent build up. In describing the function of a breakdown at the *beginning* of a track Josh Jett stated that "there is more than one way to mix and fair enough there is beat-mixing [but] atmospheric cross-fades will do just as fine and it's bringing in the track as seamless as a beatmatch anyway" (personal communication, December 10, 2011). DJs use atmospheric breakdowns, i.e. sections with no rhythmic component, as a device to enable transition between songs of different tempi. When beat-mixing the album subsequent tracks of a different tempo were returned to their normal tempo usually at these arrhythmic sections.

The main breakdown in the *middle* of a song in EDM has a different purpose which is to create a climactic build. In Rock music we found it served a different purpose again. "In Rock music a breakdown is opposite to Dance music because the breakdown in Dance music is a huge build-up to a drop, whereas this is a relief of thick fast loud music" (J Jett, personal communication, December 10, 2011). Dance music has stratified layers that peel off and give the listener sonic rest whereas Rock music has a limited dynamic range that only occasionally breaks down. A very clear example of a breakdown in Rock is in *Whole Lotta Love* by Led Zeppelin. At first I tried to replicate the EDM breakdown without much success and noted in my journal, "I feel that it requires dance music techniques to create this build that seems to be eluding me" (September 20, 2011). Josh Jett stated that the breakdown in Dance music is "a lot of work" (personal communication, December 10, 2011).

Tim Whiteman stated that the breakdowns would have been more effective if specific drum builds for each breakdown had been recorded from the outset. He also noted that the breakdowns stop abruptly in ClubRock and that a softer landing using sounds that focus the attention while the rest of the rhythm section disappears would be advantageous (personal communication, August 18, 2011). Jett commented that the breakdowns worked well in a Rock context (personal communication, December 10, 2011). This is supported by Colin Webber who stated that "the breakdowns worked well and created relief… and space to anticipate" (personal communication, January 31, 2012). Breakdowns in ClubRock did provide space in the set, an important component for a continuous Rock soundscape.

6.2.5 ClubRock set

Once the mix-breaks were constructed we started experiencing the phenomenon of beat-mixing Rock music. Tim Whiteman describes the experience:

> In order to combine Rock and Dance you need to use production techniques representative of both styles. Once the sound of the genre was established we had to make it DJ friendly. To do this Adrian essentially had to sample himself (the recordings we'd done), adding a mix-break to the start and end of the songs in Pro Tools using existing pieces of the recordings... Essentially we recorded the songs and then sampled the same recording in order to create a new version of the compositions which adhered to the Dance music form (personal communication, September 1, 2011).

When asked what he felt about the Rock album being presented as a ClubRock set Josh Jett stated that "presenting it in a way that is mixed and it's flowing as a Rock album is one step above the rest in presentation... that's full-on, that's like a cut above" (personal communication, December 10, 2011). Everett True, music critic, stated that "pop (and rock) songs are often about the 'whole'. Dance music is often about the 'moment'. Taking out the gaps between the songs blurs the boundaries, makes the music quite relentless. There are no silences. There's no pause for reflection" (personal communication, December 29, 2011). The researchers did not feel that it held a direct association with EDM but in the end produced a very hard-hitting and exciting Rock album.

Beat-mixing created a very distinctive sound unusual in a Rock album context. The album also benefited by the mix-breaks having two drum kits playing simultaneously. This created a sonically rich new structural component. The effect was advantageous for a Rock enthusiast because it resembled twin drum productions such as Feargal Sharkey's *You Little Thief*. However, Whiteman noted that because the songs were not edited to a tempo grid the drums shifted against each other and it could be seen from an EDM perspective that the DJ was not mixing accurately (personal communication, August 18, 2011). On the other hand Jett stated that "perfect is over rated, like perfect sounds in time are over rated" (personal communication, December 10, 2011). "Musicians generally agree that groove works best when it is not strictly metronomic—that is, when it is not perfectly machinelike" (Levitin 2006, 167). Finally, to resolve this problem, the mix-break sections were aligned to the tempo grid, whilst leaving the song itself in free time.

"Obviously it is a Rock genre but the structure you have come up [with] for top and tail of each track is perfect" (J Jett, personal communication, December 10, 2011). As a Rock producer it was comforting that the transitions worked in the eyes of a professional DJ. As stated previously the EDM format for this investigation initially came from Trance (Appendix 3) even though in the course of the project it developed its own form and is now totally unrecognisable. Jett stated "it is almost too nitty gritty, too full on just to get the structure for a Dance track where as Rock is free you can do what you want—it's good" (communication, December 10, 2011).

The internal song structures in this album move away from traditional 'radio friendly' song structure and this was advantageous to my professional practice. Some formats ventured further from the standard format and gave the songs space or 'air' and an independent character not previously experienced personally in composition. The ability to repeat sections a number of times enabled the tracks to open up and be developed in a longer form. Appendix 1 fully documents the song structures. The visual representation below shows the number of bars in proportionate colour length sections (labelled on the larger sections) to demonstrate the movement away from the traditional song structure.

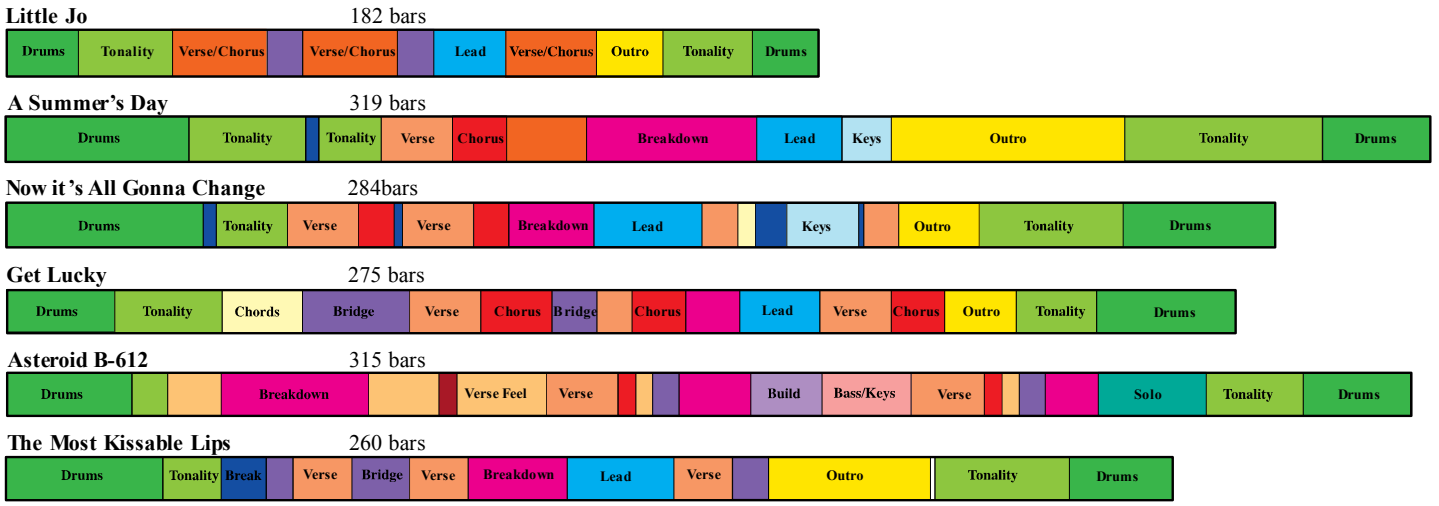


Figure 1: Proportionate visual representation of song formats.

7.0 Data Analysis

7.1 Transformational learning

Analysing the process revealed a transformative learning experience. "Perspective transformation represents not only a total change in life perspective, but an actualization of that perspective. In other words, life is not *seen* from a new perspective, it is *lived* from that perspective" (Novak 1981, 2).

> That which is 'object' we can look at, take responsibility for, reflect upon, exercise control over, integrate with some other way of knowing. That which is 'subject' we are run by, identified with, fused with, at the effect of. We cannot be responsible for that to which we are subject. What is 'object' in our knowing describes the thoughts and feelings we say we have; what is 'subject' describes the thinking and feeling that has us. We 'have' object; we 'are' subject (Mezirow 2000, 53).

In the course of the project some things that were subject in my knowing have become object. Knowledge that previously *had me* I now *have* and "can be in relationship to it, the form of [my] knowing has become more complex, more expansive" (Mezirow 2000, 54). In Kegan's view this comes closest "to the real meaning of transformation in transformational learning theory" (in Mezirow 2000, 54). The knowledge area that was transformed in my practice was the ability to extend the musical form in Rock music. The research provided a fuller understanding of the application of structural fluidity. As discussed the use of tempi, vari-speed as a production device and the use of beat-mixing and breakdowns all provided additional advances in praxis.

7.2 Diagrammatic representation

Stanley (cited in Butler 2006) uses a diagrammatic representation to depict the way EDM builds and drops over its track duration. Butler states that "although certain characteristics recur quite frequently … it is clear that they treat this structure quite freely" (2006, 224). As stated above by adopting an EDM model many effective versions of the individual track were possible. My adaptation below shows how the format worked in ClubRock.

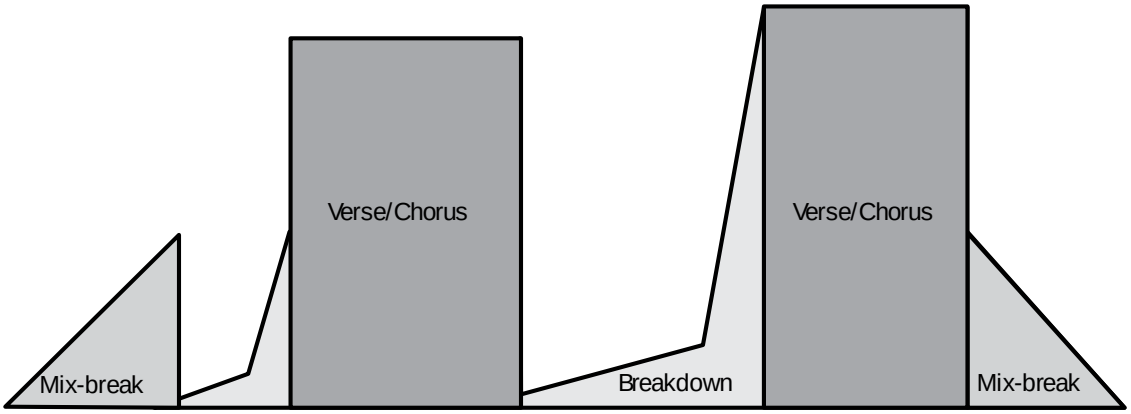


Figure 2: Visual representation of a typical structure of a ClubRock track.

Before and after the breakdown in the centre are two larger rectangles that represent the verse/chorus sections in a ClubRock track. In EDM the first verse/chorus section is smaller dynamically than in ClubRock as a result of more elements being added as the track develops. This has not been demonstrated in ClubRock because the standard elements of guitars, bass and drums are fundamental to the Rock aesthetic. The second verse/chorus is slightly louder and has a denser texture on most tracks due to the addition of backing vocals and keyboards for dynamic increment. The main breakdown in the centre starts quietly giving relief to the set before building up to the next verse-chorus. The triangular shapes at the beginning and end of the track represent the mix-breaks that crossfade from the previous and into the next track. As is standard practice in EDM, the songs also contain an additional breakdown section after the first mix-break to help the transition into the new track.

7.3 Tempo matching

In early attempts at beat-mixing, the tracks were brought to much more similar tempi by combining vari-speed with pitch-lock. This close relationship with tempi coupled with the beat-mix function created a unique sound and injected a sense of excitement into the work. Co-songwriter Chris Fletcher, when he heard the first demonstration which demonstrated tempo matching commented that, "the hairs on the back of my neck stood up" (personal communication, November 2, 2011). As stated above the final DJ set used breakdowns but could not use tempo matching due to the artefacts caused by the limitations of the technology. The adaptation of the beat-mixing approach of tracks of different tempi did not invalidate the research in anyway. Consistent tempo over a Rock album would not have been typical and would have lost positive aspects. Although having all the tracks at the same tempo would have added excitement the fact that the songs have a greater variation in tempi than EDM helps preserve the Rock aesthetic.

7.4 Beat-mixing

Beat-mixing as a function extracted from EDM works in Rock music. It created life and immediacy. It also created an exciting innovation to the traditional Rock album format. Fletcher supports this perception:

> It can't be beaten for dynamics and raw frenetic energy. The way the songs start all-in with mega guitar riffing (from the first note of *Little Jo* to the end of *Get Lucky*) and the way the songs roll into each other are superb. The songs are joined together with short segments of relentless drumming and the energy stays up in the air the whole time. It sounds convincingly like a band playing and yet each new sound (guitar over dubs, rhythm breaks, vocal etc...) comes in at exactly the right time to maintain interest, the formats are perfect (personal communication, October 13, 2011).

The mix-breaks create the ability for the album to be represented in numerous ways and this is realised through various DJ representations documented in the Lab Book and summarised in Table 2. This ability to create new representations live using different set orders and using different breakdown sections to segué between tracks provides immediacy and new possibilities for the Rock genre as a whole. This is unique in a Rock context where beat-mixing tracks can be difficult.

DJs playing rock music usually make a pretty good mess of the transitions between tracks; the genre is not easily mixed together because it lacks that extended form and is difficult to beat-mix" (A. Smith, personal communication, August 10, 2011).

7.5 Schematic expectation

Levitin, discussing the Beatles, notes that "when 'Yesterday' plays with its seven-measure phrase, it is a surprise, it still interests us because it violates schematic expectations that are even more firmly entrenched than our memory for a particular song" (2006, 115). As "music unfolds, the brain constantly updates its estimates of when new beats will occur, and takes satisfaction in matching a mental beat with a real-in-the-world one, and takes delight when a skilful musician violates that expectation in an interesting way" (Levitin 2006, 187).

This violation of expectation has taken place in ClubRock and feedback from the co-researchers and Rock professionals involved has indicated delight in the differentiation of structure. At some point after playing a loop the audience loses any sense of expectation, it is in this state that surprise acquires increased affect (Shapiro 2000). As a radio producer I experienced this timelessness as I elongated instrumental sections of Rock songs to dramatize backdrops for promotional material. The soundscape was comprised simply of the rhythm section looped over and over again. I came to appreciate the rhythm section in its own right, void of vocal lines and instrumental improvisation. The ability for ClubRock tracks, particularly *Asteroid B-612,* to loop for an extended period of time is aided by its capacity to entertain without requiring melody. This enabled the format of the song to be fluid, to be lengthened and still be a viable Rock structure.

The extended format derived from the research created freedom in praxis and an extension in creative thought. These techniques can now be incorporated easily in my Rock composition without the use of beat-mixing that developed them. The lessons learned from the research have developed an armoury of production tools that are applicable to many different recording situations.

7.6 Personal reflection

Get Lucky works as a Rock album and is reminiscent of early Splatterhead recordings—especially the period when the band was called the Lompoc County Splatterheads. As is supported by peer review, I also feel that the presentation of the tracks benefits greatly by being seguéd through beat-mixing. The continuous soundtrack has the tendency to hold the listener's attention until the end. The extended structure of the individual songs also creates another dimension of interest and adds to the listening experience. The extended form creates an environment where the listener can be immersed, even lost, in the music without the interruption of the gaps that accompany the traditional album format. If the compositions were played individually in a traditional album format there would be a significant difference in the listening experience. However, the addition of mix-breaks allows the situation where recorded or mediated Rock music can be reproduced with variation to introduce spontaneity or immediacy through the medium of a DJ.

Black Sabbath extended their music through strategic melodic journeys and deeply influenced the genre of Heavy Metal, which utilised long form as standard practice. The use of extended introductions, breakdowns, key changes and time signature variations all contribute to a genre that is unique. Popular Rock bands like Tool have used this form to present their songs in a way that mainstream Rock audiences can now embrace. Many other bands have experimented and used extended forms effectively in recording and live performance. Similarly, James Brown's *Live at the Apollo* makes good use of a theme as a segué between each song to form a continuous soundtrack. ClubRock is not claiming uniqueness in creating a long form rock soundtrack—The Who, The Beatles, David Bowie and Pink Floyd have already successfully achieved long form recordings. ClubRock is another variation of long form presentation in Rock music but with an approach that is independent and with unique outcomes.

The application of beat-mixing, as discussed above, required regular breakdowns to introduce dynamic variation in a continuous set. Once the set was produced it was discovered that extending the form allowed diversity of arrangement. This diversity of arrangement was a positive research outcome from the application of the mix-breaks and breakdowns.

On reflection, re-recording the compositions at the same tempo would have allowed easier integration of DJ techniques. A set of the same tempo was achieved by vari-speed and was effective but to be able to provide a satisfactory master the compositions would ideally have to have been re-recorded. Similarly, the structure developed as the project progressed and in the end was far removed from what had been recorded originally. The ability to re-record with this new structure, rather than looping pre-recorded material, would have been advantageous.

An interesting extension to the research project would be to explore the possibility of live performance using two drum kits playing simultaneously to create the crossover of the tracks. This would create a situation where the audience would be able to experience a live nonstop Rock set. With the research results presented on the album the continuous set has been demonstrated and is achievable live.

8.0 Conclusion

Get Lucky as an album has made a contribution to the exchange between Rock music and EDM. The research questions were explored and answered through the process of making the album. Rock music can implement EDM's structural fluidity to create an album in the form of a DJ set in an effectual and exciting way. The use of mix-breaks enabled the compositions to be blended together in a continuous soundscape that holds the listeners attention throughout. The process of adding mix-breaks created immediacy in recorded or mediated Rock music. Rock audiences read the ClubRock set as a differentiated Rock album: An album that adds excitement to the standard format but does not detract from the Rock experience. As a practioner it created a framework to explore the extension of the internal structure of the composition.

During the process of this project a number of alternative DJ sets were produced by professional DJs and illustrated the ability to have numerous representations of the album. The final set presented on the album is just one of many possible configurations of the material and was chosen as a good representation of the concept. As stated previously mediated music is music reproduced independent of the conditions of its initial production and musical immediacy is music created spontaneously (Fikentscher 2000, 15). Now in Rock music, musical immediacy and mediated music can coexist. The album demonstrates how a recording can be manipulated live to make a new spontaneous work and this can be claimed as a new contribution to Rock music. Beat-mixing in Rock music as a function extracted from EDM production techniques can provide a new and exciting representation of Rock music.

The value of this research, in addition to the creative synthesis, is evident in what has been learnt and is transferable in the application of various EDM production principles to Rock music composition. Further value lies in how the production processes and principles of extending musical form can be utilised in future record production. It certainly produced something distinctly different from my usual professional practice.

8.1 Future research

> *What's next? Who knows – all that's certain is that something somewhere is busy evolving, just like it's always done* (Brewster 2000, 408).

The addition of structural fluidity to my praxis has led to an interest in the study of compositional triggers in live performance. Sawyer denotes compositional triggers as signs: "In group creativity—synchronically mediated action—interaction between creating agents is immediate, durationally constrained to the moment of creation, and is mediated by linguistic or musical signs" (Sawyer 2003, 119). From my initial investigation, music improvisation theory seems to address two areas only—rhythmic improvisation and melodic improvisation. In order to perform ClubRock in a live band context it would be desirable to be able to improvise song structure with fluidity and spontaneity. This would require verbal and non-verbal communication between performing musicians in a live environment. Future research will investigate the use of non-conventional compositional triggers, both musical and non-musical, to signify sectional changes in live performance.

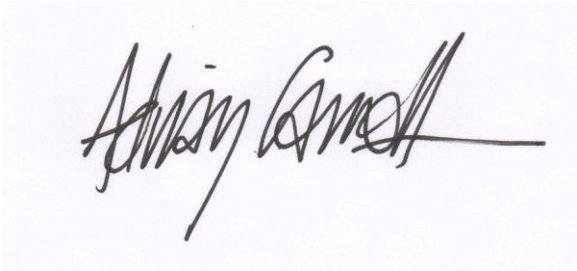
9.0 Acknowledgements

I would like to thank my principal supervisor Associate Professor Mike Howlett for the expertise that has benefited the project immensely not just academically but contextually and aesthetically. Mike was exceptionally supportive personally throughout my candidature from conception. I would also like to acknowledge Dr Andy Brader, associate supervisor, who gave me confidence in my abilities to satisfy the requirements of the Masters Degree and who supplied insight into the world of the DJ in an academic context. The compositional process and research has been a collaborative effort. Chris Fletcher had a very important role as lyricist and co-writer of the songs. I would like to acknowledge Tim Whiteman as the principal co-researcher-producer-engineer-DJ who has made the phenomenon of ClubRock possible. This project would not have materialised without the principal players in the band the *Manarays*—Chris Fletcher vocals, Simon Faulkner vocals, Phil Dunlea bass, Dan Sugars drums, David Kershaw on the keyboards and Justine Johnson singing backing vocals. Kenya Carroll who designed the album artwork while completing her studies. I would like also to thank the additional DJs on the project, Nino Live, Monique Davison, Alex Smith, Alan Dyer and Josh Jett.

I would also like to thank all the other contributors and co-researchers on the project: Aaron Quathamer, Adam Quaife and the House of Q, Alice Baroni, Alice Steiner, Ben Ricketts, Bill McMahon, The Boondall Boys, Craig Desilets, Daniel Fisher, Daniel Newstead, Dr Daniel Mafé, Dr Cheryl Stock, Dr Colin Webber, Dr Gavan Carroll, Dr Kris Plummer, David Neil, Edith Burrows, Everett True, Gary Slater, Hudson Graham, Hugh Brown, Ian Amos, Ian Taylor, Jeremy Mortimer, Jet Carroll, Jimmy Watts, Joel Hodgkinson, John Dagwell, John McKeering, John Reid, Kayne Hunnam, Liam Cusack, Martin Sol Robinson, Matt Oliver, Miro Mackie, Nicko Turbo Barclay-Bertram, Ommy Butler, Patrick Drake, Peter Mengede, Peter Willersdorf, Rita Carroll, Scott Gellatly, Sean Tracey, Seth Jackson, Sly Faulkner, Steven King, Tom Mason, Tristan Hoogland, Dominic at DOMC Mastering, Clinton Bell and Maxine McCabe.

10.0 Statement of Originality

The work contained in this exegesis has not previously been submitted to meet requirements for an award at any higher educational institution. To the best of my knowledge and belief, the exegesis contains no material previously published or written by another person except where due acknowledgement is made in the text.



Adrian Carroll

16/06/2013

11.0 References

Adamo, M., D. Felton and Sample Magic. 2010. *The secrets of house music production: a reference manual from Sample Magic*. London: Sample Magic.

Blume, J. 1999. *6 steps to songwriting success: the comprehensive guide to writing and marketing hit songs*. New York: Billboard Books.

Brewster, B. and F. Broughton. 2000. *Last night a DJ saved my life: the history of the disc jockey*. 1st American ed. New York: Grove Press.

Broughton, F. and B. Brewster. 2003. *How to DJ right: the art and science of playing records*. 1st American ed. New York: Grove Press.

Brown, R. J. and M. Griese. 2000. *Electronica dance music programming secrets*. 2nd ed. Hemel Hempstead: Prentice Hall.

Butler, M. J. 2006. *Unlocking the groove: rhythm, meter, and musical design in electronic dance music*. Bloomington: Indiana University Press.

Candy, L. 2006. *Practice-Related Research*. Creativity and Cognition Studios, University of Technology, Sydney.

Chanan, M. 1995. *Repeated takes: a short history of recording and its effects on music*. London: Verso.

Creswell, J. W. 2003. *Research design: qualitative, quantitative, and mixed method approaches*. 2nd ed. Thousand Oaks, Calif.: Sage Publications.

Dean, R. T. and H. Smith. 2009. *Practice-led Research, Research-led Practice in the Creative Arts.* Edinburgh: Edinburgh University Press.

Denzin, N. K. and Y. S. Lincoln. 2000. *Handbook of qualitative research*. 2nd ed. Thousand Oaks, Calif.: Sage Publications.

Denzin, N. K. and Y. S. Lincoln. 2005. *The SAGE handbook of qualitative research*. 3rd ed. Thousand Oaks: Sage Publications.

Dettmar, K. J. H. and W. Richey. 1999. *Reading rock and roll: authenticity, appropriation, aesthetics*. New York: Columbia University Press.

Douglass, B. G. and C. Moustakas. 1985. Heuristic Inquiry - the Internal Search to Know. *Journal of Humanistic Psychology* 25 (3): 39-55.

Durant, A. 1985. Rock Revolution or Time-No-Changes: Visions of Change and Continuity in Rock Music. *Popular Music* 5: 97-121.

Fikentscher, K. 2000. *"You better work!": underground dance music in New York City*. Hanover, NH: University Press of New England.

Gracyk, T. 1996. *Rhythm and noise: an aesthetics of rock*. Durham, NC: Duke University Press.

Howlett, M. 2009. *The record producer as nexus: creative inspiration, technology and the recording industry*, Doctoral dissertation. University of Glamorgan, Wales.

Kronengold, C. 2008. Exchange Theories in Disco, New Wave, and Album-Orientated Rock. *Criticism* (50): 43-82 (accessed April 30, 2010).

Levitin, D. J. 2006. *This is your brain on music: the science of a human obsession*. New York, N.Y.: Dutton.

Lichtman, M. 2011. *Understanding and evaluating qualitative educational research*. Los Angeles: SAGE.

McFarlane, I. 1999. *The encyclopedia of Australian rock and pop*. St. Leonards, NSW: Allen & Unwin.

Mezirow, J. 2000. *Learning as transformation: critical perspectives on a theory in progress*. 1st ed. San Francisco: Jossey-Bass.

Miller, F. P., A. F. Vandome and J. McBrewster. 2009. *Electronic dance music*. Beau Bassin, Mauritius: Alphascript Publishing.

Moore, A. F. 2003. *Analyzing popular music*. Cambridge: Cambridge University Press.

Moustakas, C. E. 1990. *Heuristic research: design, methodology, and applications*. Newbury Park: Sage Publications.

Moustakas, C. E. 1994. *Phenomenological research methods*. Thousand Oaks, Calif: Sage.

Novak, J. 1981. *Achieving perspective transformation*. Doctoral dissertation, International College, CA.

Pascall, J. 1978. *The illustrated history of rock music*. London; New York: Hamlyn.

Patton, M. Q. 2002. *Qualitative research and evaluation methods*. 3rd ed. Thousand Oaks, Calif.: Sage.

Polanyi, M. 1983. *The tacit dimension*. Gloucester, Mass.: Peter Smith.

Sawyer, R. K. 2003. *Group creativity: music, theater, collaboration*. Mahwah, N.J.: L. Erlbaum Associates.

Shapiro, P. and I. Lee. 2000. *Modulations: a history of electronic music: throbbing words on sound*. New York: Caipirinha Productions.

Smith, H. and R. T. Dean. 2009. *Practice-led research, research-led practice in the creative arts*. *Research methods for the arts and humanities.* Edinburgh: Edinburgh University Press.

Snoman, R. 2004. *The dance music manual: tools, toys and techniques*. Burlington, MA.: Focal Press.

Verderosa, T. and R. Mattingly. 2002. *The techno primer: the essential reference for loop-based music styles*. Milwaukee, Wis.; Great Britain: Hal Leonard.

Webber, S. 2008. *DJ skills: the essential guide to mixing and scratching*. Oxford: Focal.

Zak III, A. 2001. *The poetics of rock: cutting tracks, making records*. Berkeley: University of California Press.

12.0 Bibliography

Abbey, E. J. 2006. *Garage rock and its roots: musical rebels and the drive for individuality*. Jefferson, N.C.: McFarland & Company.

Adamo, M., D. Felton and Sample Magic. 2010. *The secrets of house music production: a reference manual from Sample Magic*. London: Sample Magic.

Adorno, T. W. and H. Lonitz. 2006. *Towards a theory of musical reproduction: notes, a draft, and two schemata*. Cambridge, UK; Malden, MA: Polity.

Anfara, V. A. and N. T. Mertz. 2006. *Theoretical frameworks in qualitative research*. Thousand Oaks, Calif.: SAGE Publications.

Ballou, G. 1998. *Handbook for sound engineers: the new audio cyclopedia*. 2nd ed. Boston: Focal Press.

Bambara, C. S., C. P. Harbour, T. G. Davies and S. Athey. 2009. The Lived Experience of Community College Students Enrolled in High-Risk Online Courses. *Community College Review* 36 (3): 219-238.

Barrett, E. and B. Bolt. 2007. *Practice as research: approaches to creative arts enquiry*. London New York: I.B. Tauris.

Berg, B. L. 1989. *Qualitative research methods for the social sciences*. Boston: Allyn and Bacon.

Berkowitz, A. 2010. *The improvising mind: cognition and creativity in the musical moment*. New York: Oxford University Press.

Blume, J. 1999. *6 steps to songwriting success: the comprehensive guide to writing and marketing hit songs*. New York: Billboard Books.

Bowden, J. A. and E. Walsh. 2000. *Phenomenography*. *Qualitative research methods.* Melbourne: RMIT University Press.

Brewster, B. and F. Broughton. 2000. *Last night a DJ saved my life: the history of the disc jockey*. 1st American ed. New York: Grove Press.

Brewster, B. 2006. *Last Night a DJ Saved My Life: The History of the Disc Jockey*. Rev. Ed. ed. London: Headline.

Broido, E. M. and K. Manning. 2002. Philosophical foundations and current theoretical perspectives in qualitative research. *Journal of College Student Development* 43 (4): 434-445.

Broughton, F. and B. Brewster. 2003. *How to DJ right: the art and science of playing records*. 1st American ed. New York: Grove Press.

Brown, L. B. 2000. Phonography, rock records, and the ontology of recorded music. *Journal of Aesthetics and Art Criticism* 58 (4): 361-372.

Brown, R. J. and M. Griese. 2000. *Electronica dance music programming secrets*. 2nd ed. Hemel Hempstead: Prentice Hall.

Butler, M. J. 2006. *Unlocking the groove: rhythm, meter, and musical design in electronic dance music*. Bloomington: Indiana University Press.

Butler, M. J. 2012. *Electronica, dance and club music*. *Library of essays on popular music.* Farnham, Surrey: Ashgate.

Bygrave, M. and L. Nash. 1977. *Rock*. London: H. Hamilton.

Candy, L. 2006. *Practice-Related Research*. Creativity and Cognition Studios, University of Technology, Sydney.

Chanan, M. 1995. *Repeated takes: a short history of recording and its effects on music*. London: Verso.

Coker, J. 1987. *Improvising jazz*. New York London: Fireside.

Cranton, P. 1996. *Professional development as transformative learning: new perspectives for teachers of adults*. 1st ed, San Francisco: Jossey-Bass Publishers.

Creswell, J. W. 2003. *Research design: qualitative, quantitative, and mixed method approaches*. 2nd ed. Thousand Oaks, Calif.: Sage Publications.

Csikszentmihalyi, M. 2002. *Flow: the classic work on how to achieve happiness*. Rev. ed. London: Rider.

Cunningham, M. 1996. *Good vibrations: a history of record production*. Chessington: Castle Communications.

Dean, R. T. and A. C. Brown. 1989. *Creative improvisation: jazz, contemporary music, and beyond: how to develop techniques of improvisation for any musical context*. Milton Keynes England: Open University Press.

Dean, R. T. and H. Smith. 2009. *Practice-led Research, Research-led Practice in the Creative Arts.* Edinburgh: Edinburgh University Press.

Denzin, N. K. and Y. S. Lincoln. 2000. *Handbook of qualitative research*. 2nd ed. Thousand Oaks, Calif.: Sage Publications.

Denzin, N. K. and Y. S. Lincoln. 2005. *The SAGE handbook of qualitative research*. 3rd ed. Thousand Oaks: Sage Publications.

Dettmar, K. J. H. and W. Richey. 1999. *Reading rock and roll: authenticity, appropriation, aesthetics*. New York: Columbia University Press.

Douglass, B. G. and C. Moustakas. 1985. Heuristic Inquiry - the Internal Search to Know. *Journal of Humanistic Psychology* 25 (3): 39-55.

Durant, A. 1985. Rock Revolution or Time-No-Changes: Visions of Change and Continuity in Rock Music. *Popular Music* 5: 97-121.

Emerick, G. and H. Massey. 2006. *Here, there, and everywhere: my life recording the music of the Beatles*. New York, N.Y.: Gotham Books.

Eshelman, R. 2009. *Performatism, or, the end of postmodernism*. Aurora, CO: Davies Group.

Etherington, K. 2004. *Becoming a reflexive researcher: using our selves in research*. London Philadelphia: Jessica Kingsley Publishers.

Everest, F. A. 1989. *The master handbook of acoustics*. 2nd ed. Blue Ridge Summit, PA: TAB Books.

Fikentscher, K. 2000. *"You better work!": underground dance music in New York City*. Hanover, NH: University Press of New England.

Fornäs, J. 1995. The Future of Rock: Discourses That Struggle to Define a Genre. *Popular Music* 14 (1): 111-125.

Garza, G. 2006. A clarification of Heidegger's phenomenology. *American Psychologist* 61 (3): 255-256.

Gracyk, T. 1996. *Rhythm and noise: an aesthetics of rock*. Durham, NC: Duke University Press.

Green, J. 2005. *DJ, dance, and rave culture*. *Examining pop culture*. Detroit: Greenhaven Press.

Greenwald, J. 2002. Hip-hop drumming: The rhyme may define, but the groove makes you move. *Black Music Research Journal* 22 (2): 259-271.

Howlett, M. 2009. *The record producer as nexus: creative inspiration, technology and the recording industry*, Doctoral dissertation. University of Glamorgan, Wales.

Hustwit, G. 1991. *Releasing an independent record*. Costa Mesa, CA: Rockpress Intl. pub.

Katz, R. A. 2007. *Mastering audio: the art and the science*. 2nd Ed. ed: Amsterdam; Boston: Elsevier/Focal Press.

Keen, E. 1975. *A primer in phenomenological psychology*. New York: Holt, Rinehart and Winston.

Kronengold, C. 2008. Exchange Theories in Disco, New Wave, and Album-Orientated Rock. *Criticism* (50): 43-82.

Kumar, R. 2011. *Research Methodology: A Step-by-Step Guide for Beginners*. 3rd Ed. ed. London: Sage.

Levitin, D. J. 2006. *This is your brain on music: the science of a human obsession*. New York, N.Y.: Dutton.

Lichtman, M. 2011. *Understanding and evaluating qualitative educational research*. Los Angeles: Sage.

Lynch, T. D. and P. L. Cruise. 2006. *Handbook of organization theory and management: the philosophical approach*. 2nd ed. Boca Raton, FL: Taylor & Francis.

McFarlane, I. 1999. *The encyclopedia of Australian rock and pop*. St. Leonards, NSW: Allen & Unwin.

Mezirow, J. 1990. *Fostering critical reflection in adulthood: a guide to transformative and emancipatory learning*. 1st ed. San Francisco: Jossey-Bass Publishers.

Mezirow, J. 1998. On critical reflection. *Adult Education Quarterly* 48 (3): 185-198.

Mezirow, J. 2000. *Learning as transformation: critical perspectives on a theory in progress*. 1st ed. San Francisco: Jossey-Bass.

Miller, F. P., A. F. Vandome and J. McBrewster. 2009. *Electronic dance music*. Beau Bassin, Mauritius: Alphascript Publishing.

Moore, A. F. 2003. *Analyzing popular music*. Cambridge: Cambridge University Press.

Moustakas, C. E. 1972. *Loneliness and love*. Spectrum book. Englewood Cliffs, N.J.: Prentice-Hall.

Moustakas, C. E. 1990. *Heuristic research: design, methodology, and applications*. Newbury Park: Sage Publications.

Moustakas, C. E. 1994. *Phenomenological research methods*. Thousand Oaks, Calif: Sage.

Muirhead, B. 1984. *The record producers file: a directory of Rock album producers 1962-1984*. Poole: Blandford.

Mullins, G. and M. Kiley. 2002. 'It's a PhD, not a Nobel Prize': how experienced examiners assess research theses. *Studies in Higher Education* 27 (4): 369-386.

Neill, B. 2002. Pleasure beats: Rhythm and the aesthetics of current electronic music. *Leonardo Music Journal* 12: 3-6.

Novak, J. 1981. *Achieving perspective transformation*. Doctoral dissertation, International College, CA.

Paprock ,K.1992. "Mezirow, J. "Transformative dimensions of adult learning" (Book Review)". *Adult education quarterly (American Association for Adult and Continuing Education)*, 42 (3), p. 195.

Pascall, J. 1978. *The illustrated history of rock music*. London; New York: Hamlyn.

Patton, M. Q. 2002. *Qualitative research and evaluation methods*. 3rd ed. Thousand Oaks, Calif.: Sage.

Pohlmann, K. C. 1989. *Principles of digital audio*. 2nd ed, *Howard W. Sams & Company audio library*. Indianapolis, Ind., USA: H.W. Sams.

Polanyi, M. 1983. *The tacit dimension*. Gloucester, Mass.: Peter Smith.

Rooksby, R., R. Fogg and J. Roberts. 2011. *The songwriting sourcebook: how to turn chords into great songs*. New, 2nd ed. San Francisco, CA: Backbeat Books.

Salmon, P. 1992. *Achieving a PhD: ten students' experience*. Stoke-on-Trent, Staffordshire: Trentham Books.

Santi, M. 2010. *Improvisation: between technique and spontaneity*. Newcastle upon Tyne: Cambridge Scholars.

Sawyer, R. K. 2003. *Group creativity: music, theater, collaboration*. Mahwah, N.J.: L. Erlbaum Associates.

Schoenberg, A., P. Carpenter and S. Neff. 2006. *The musical idea and the logic, technique and art of its presentation*. Bloomington, Ind.: Indiana University Press.

Schön, D. A. 1983. *The reflective practitioner: how professionals think in action*. New York: Basic Books.

Schön, D. A. 1991. *The Reflective turn: case studies in and on educational practice*. New York: Teachers College Press.

Shah, A. K. and D. M. Oppenheimer. 2008. Heuristics made easy: an effort-reduction framework. *Psychol Bull* 134 (2): 207-22.

Shapiro, P. and I. Lee. 2000. *Modulations: a history of electronic music: throbbing words on sound*. New York: Caipirinha Productions.

Smith, H. and R. T. Dean. 2009. *Practice-led research, research-led practice in the creative arts*. *Research methods for the arts and humanities.* Edinburgh: Edinburgh University Press.

Snoman, R. 2004. *The dance music manual: tools, toys and techniques*. Burlington, MA.: Focal Press.

Stavrou, M. P. 2011. *Mixing with your mind*, Mosman: Flux Research.

Stenhouse, L. 1981. What Counts as Research. *British Journal of Educational Studies* 29 (2): 103-114.

Tacchi, J., D. Slater, G. Hearn and Unesco New Delhi. 2003. *Ethnographic action research*. New Delhi: UNESCO New Delhi.

Tagg, P. 1994. From Refrain to Rave: The Decline of Figure and the Rise of Ground. *Popular Music* 13 (2): 209-222.

Tobler, J. and S. Grundy. 1982. *The record producers*. 1st U.S. ed. New York: St. Martin's Press.

Van Manen, M. 1997. *Researching lived experience: human science for an action sensitive pedagogy*. 2nd ed. London, Ont.: Althouse Press.

Verderosa, T. and R. Mattingly. 2002. *The techno primer: the essential reference for loop-based music styles*. Milwaukee, Wis.; Great Britain: Hal Leonard.

Von Appen, R. and A. Doehring. 2006. Nevermind The Beatles, here's Exile 61 and Nico: 'The top 100 records of all time' - a canon of pop and rock albums from a sociological and an aesthetic perspective. *Popular Music* 25 (1): 21-39.

Waugh, P. 1993. *Postmodernism: a reader*. Repr. with minor corrections. ed. London New York: Edward Arnold.

Webber, S. 2008. *DJ skills: the essential guide to mixing and scratching*. Oxford: Focal.

Wicke, P. 1990. *Rock music: culture, aesthetics, and sociology*. Cambridge; New York: Cambridge University Press.

Wisker, G. 2008. *The postgraduate research handbook: succeed with your MA, MPhil, EdD and PhD*. 2nd ed, *Palgrave study guides*. New York: Palgrave Macmillan.

Woram, J. M. 1976. *The recording studio handbook*. 1st ed. Plainview, N.Y.: Sagamore Pub. Co.

Zak III, A. 2001. *The poetics of rock: cutting tracks, making records*. Berkeley: University of California Press.

Appendix 1

Song Structures

A Summer's Day C Maj BPM 164

Drums (41 bars) | Tonality (26 bars) | Break (3 bars) | Tonality (14 bars) | Verse (16 bars) | Chorus (12 bars) | Verse/Chorus (18 bars) | Breakdown (38 bars) | Lead (19 bars) | Keys (12 bars) | Outro (52 bars) | Tonality (44 bars) | Drums (24 bars)

Now It's All Gonna Change B min BPM 167

Drums (44 bars) | Break (3 bars) | Tonality (16 bars) | Verse (16 bars) | Chorus (8 bars) | Break (2 bars) | Verse (16 bars) | Chords (8 bars) | Breakdown (19 bars) | Lead (24 bars) | Verse (8 bars) | Chords (4 bars) | Break (7 bars) | Keys (16 bars) | Break (1 bars) | Verse (8 bars) | Outro (18 bars) | Tonality (32 bars) | Drums (34 bars)

Get Lucky Ab min BPM 173 Db min instrumental

Drums (24 bars) | Tonality (24 bars) | Chords (18 bars) | Bridge (24 bars) | Verse (16 bars) | Chorus (16 bars) | Bridge (10 bars) | Verse (8 bars) | Chorus (12 bars) | Breakdown (12 bars) | Lead (18 bars) | Verse (16 bars) | Chorus (12 bars) | Outro (16 bars) | Tonality (18 bars) | Drums (31 bars)

Asteroid B-612 B min BPM 185

Drums (28 bars) | Tonality (8 bars) | Verse Feel (12 bars) | Breakdown (33 bars) | Verse Feel (16 bars) | Chorus Feel (4 bars) | Verse Feel (20 bars) | Verse (16 bars) | Chorus (4 bars) | Verse Feel (4 bars) | Bridge (6 bars) | Breakdown (16 bars) | Build (16 bars) | Bass and Keyboard Breakdown (20 bars) | Verse (16 bars) | Chorus (4 bars) | Verse Feel (4 bars) | Bridge (6 bars) | Breakdown (12 bars) | Lead (24 bars) | Tonality (22 bars) | Drums (24 bars)

The Most Kissable Lips E min BPM 193 F# min instrumental

Drums (35 bars) | Tonality (13 bars) | Break (10 bars) | Bridge (6 bars) | Verse (13 bars) | Bridge (13 bars) | Verse (13 bars) | Breakdown (22 bars) | Lead (24 bars) | Verse (13 bars) | Bridge (8 bars) | Outro (36 bars) | End (1bar) | Tonality (30 bars) | Drums (23 bars)

Little Jo E min BPM 118 D min instrumental

Drums (16 bars) | Tonality (22 bars) | Verse/Chorus (22 bars) | Bridge (8 bars) | Verse/Chorus (20 bars) | Bridge (8 bars) | Lead (16 bars) | Verse/Chorus (20 bars) | Outro (15 bars) | Tonality (20 bars) | Drums (15 bars)

Appendix 2

Heuristic Inquiry

Heuristic research has a number of phases: Initial Engagement, Immersion, Incubation, Illumination, Explication and Creative Synthesis (Moustakas 1990). This model is reduced to three phases in the article entitled *Heuristic Inquiry: The Internal Search to Know* (Moustakas 1985). These three phases of Immersion, Acquisition and Realisation are now used to explain the process of inquiry.

The immersion phase establishes an intense interest in the topic—one that has important meaning to the researcher. The research question will emerge from this initial phase. In the immersion phase the researcher is engaged in the research question, thinking, walking, sleeping and dreaming, in conversation, in writing, anything connected with the topic is explored and becomes relevant (Moustakas 1990). The acquisition stage is the time to engage in specific data gathering having clarified the research topic and areas of interest. The realisation phase is the culmination of the process and prior to this phase the researcher is thoroughly conversant with the data and the details of the experience as a whole. A further time of solitude allows tacit knowledge to discern the most appropriate form of representation—be it artwork, a literary expression or music. This creative synthesis "is not a summary or recapitulation" it is a new reality that captures the undeniable essence of the phenomena that has been revealed (Douglass and Moustakas 1985, 52).

The primary researcher is the only one that can state that the report is a true representation of the phenomena and this requires thorough self-appraisal and honesty. It takes time to check material, interpretations and the "appraisal of significance" to ensure that the creative synthesis portrays the phenomenon (Moustakas 1990, 32).

Appendix 3

Generic Trance Format

Intro Bars 1-16	16	Just drums
Bars 16-32	16	Elements of the drum mix are introduced
First Body Bars 32-48	16	Bass line starts The main groove is introduced
Bars 48-64	16	Instrumentation is introduced and build, motif is introduced
The Drop Bars 64-72	8	All percussive elements bar the kick drum are dropped from the mix, the motif continues with a closed filter. By the fourth bar percussive elements are gradually introduced as the filter on the motif gradually opens up. This indicates that the track is coming back in full swing, building expectation.
Second Body Bars 72-88	16	A crash symbol at the last beat of the drop signifies a new section where a new motif is introduced, both being greatly effected through filtering.
Bars 88-104	16	Filters open giving the sense that the track is building, percussion builds top and tail this section.
The Drop Bars 104-108	4	A crash symbol cuts the music leaving only the motif and the track builds again.
The Reprise Bars 108-116	8	A snare roll builds up over the eight bars, builds to full intensity.
The Main Body Bars 116-148	32	All the instruments play together; this is “used to drive the message of the track home” (Snoman 2004, 49-51).
Bars 148-180	32	Snare embellishments are added
The Outro Bars 180-196	16	One of the motifs is dropped after a crash and the other is slowly filtered out leaving only the bass and percussion.
Bars 196-212	16	The bass is dropped out leaving just the percussion to be mixed with the next track for transition.

Table 3: Generic Trance format from ‘The Dance Music Manual’ (Snoman. 2004. 49-51).

The formation of the creative work involved the practical application of the information gathered from the interviews. The work evolved in response to attempts to implement DJ techniques rather than as a response to comment from industry practitioners, although these also informed the practice.

Appendix 4

ClubRock Lab Book

Adrian Dominic Carroll

Music and Sound Discipline
Creative Industries Faculty
Queensland University of Technology
Brisbane Australia
2012

Lab Book

This Lab Book is the documented process of the production of the album *Get Lucky*. The songs were recorded at Brisbane Records, and Tim Whiteman's studio (both small studio environments). The rhythm section was recorded at Gasworks studio with additional guitar and bass overdubs recorded at JMC Academy Brisbane. The *Manarays* are: Adrian Carroll (guitar), Chris Fletcher (vocals), Simon Faulkner (vocals), Phil Dunlea (bass guitar), Dan Sugars (drums) and David Kershaw (keyboards) complimented by Justine Johnson (backing vocals). The project was supervised by Associate Professor Mike Howlett with Dr Andy Brader as the Associate Supervisor.

The rhythm guitars were recorded with a Shure SM57 at JMC, except for the track *Little Jo* which also included a track recorded at Brisbane Records creating two sounds, one on each side of the stereo field. The rhythm guitar is a 2004 Gibson Les Paul Junior played through a Marshall JCM900, 100 Watt head and Marshall 1960 half stack. The lead guitar was recorded with a 60th anniversary USA Fender Fat Stratocaster through a Fender Deluxe Amplifier unless otherwise stated. The vocal was recorded through a Rode NT2.

All compositions were written by Chris Fletcher and Adrian Carroll, except *Asteroid B-612* written by Fred 'Sonic' Smith. All tracks are originally recorded in the 24 bit, 48 kHz format on Pro Tools. These recording were mixed as a ClubRock set in a 32 bit, 96 kHz session and mastered in that format to produce the demonstration CD. This Lab Book also documents recording two songs for the Boondall Boys which were not included on the final creative synthesis.

Contents

1.0 Reference Songs

Following is a list of music that was listened to in developing an understanding of the subject and for inspiration in the development of the project's creative outcomes.

Artistes

Lead Zeppelin, Rick Rubin, Steve Albini , Rolling Stones, The Who, Cream, Black Sabbath, MC5, AC/DC, Zodiac Mindwarp, Sonics Rendezvous Band, The Grateful Dead, The Meters, Jimi Hendrix, The Velvet Underground, Happy Mondays, The Stones Roses, Charlatans, The Inspiral Carpets, Primal Scream. Miles Davis, John Cage, James Brown, Jimmy McGiff, The Temptations, Iggy Pop, Union Carbide, Ramones, Santana, Osibisa, Beach Boys, Alan Vega, Gary Numan, Beck, Michael Jackson, Grand Master Flash, Black Spades, Edwin Starr, War, Empire of the Sun, Klaxons, The Presets, Justice, Old School Tie, Karsh Kale, Jochen Pash, The Hepcats, Kenny Gamble and Leon Hutt & Sigma Sound, Chemical Brothers, Fatboy Slim, Sly Stone, Terry Riley, Pharoah Sanders, La Monte Young, First Catch, Melle Mel, Cybotron, Erik Satie, Karlheinz Stockhausen, Steve Reich, Brian Eno, Ryuichi Sakamoto, Ministry of Sound, Yellow Magic Orchestra, Can, Faust, Neu, Harold Melvin and the Bluetones.

Songs/Albums

Solaris Heights—*Solarism (Sunglasses After Dark Mix)*, JK Walker—*Inertia* (original), Christian Hornbostel—*Tonight*, The O'Jays—*Love Train*, Fred Wesley—*House Party*, Babe Ruth— *Bowtie on Funk*, Minu Dibango—*Soul Makossa*, Barrabas— *Woman/ Wild Safari/ The Mexican*, Rare Earth—*Get Ready*, Iron Butterfly—*In-A-Gabba-Da-Vida*, Michael Olatunji—*Drums of Passion*, Frank Wilson—*Do I love You*, The Carstairs—*It Really Hurts Me Girl*, Bruce Springsteen—*Nebraska*, Sleezy D—*I've lost Control*, Marshall Jefferson—*Acid Tracks/ Washing Machine*, Eric Prydz—*Call On Me* (Remix), Steve Windwoods—*Valeri*, Crookers—*Thunderstruck* (AC/DC), Cosmic Gate—*The Milky Way/ Human Beings/ I feel wonderful*, Marlena Shaw—*Woman in the Ghetto*, Blueboy—*Remember Me*, Hard Fi—*Hard to Beat (Alan Braxe remix)*, Hard-Fi—*Livin' for the Weekend*, Digitalism—*Echoes*, Dinosaur L—*Go Bang*, Can—*Mother Sky*, Diana Ross—*Love Hangover*, Harold Melvin—*The Love I Lost*, The Trammps—*Love Epidemic*, Eddie Kendricks—*A Date in the Rain*,

Betty Wright—*Where is the Love*, MFSB—*Love is the Message*, Erucu Jermaine Jackson—*Mahogany Soundtrack*, Cooley High—*Two Pigs and a Hog*, Billy Squires—*Big Beat*, Loletta Hollaway—*Hit and Run*, Love Unlimited Orchestra—*Love's Theme*, Eddie Kendricks—*Girl You Need a Change of Mind*, Don Downing—*Dream World*, BT Express—*Do It Till Your Satisfied*, Gloria Gaynor—*Never Say Goodbye*, Rare Earth—*Happy Song*, Musique—*In the Bush*, Tom Moulton's Remixes—*Love is the Message*, Double Exposure—*Ten Percent*, Voyage & Cerrone—*Call Me tonight*, Johnny Bristols—*Take Me Down*, Miquel Brown—*Close to Perfection/ So Many Men So Little Time*, Rose Lawrence—*American Love*, Bucks Fizz—*I Hear you Talk*, Evelyn Thomas—*High Energy*, Marlena Shaw—*Touch Me In the Morning*, Herb Alpert—*Rise*, Patrick Cowley—*You Made Me Feel (Mighty Real)*, Sylvester—*Do you Wanna Funk*, Jimmy Ruffin—*Hold Onto My love*, Incredible Bongo Band—*Apache/Bongo Rock*, James Brown— *Live at the Apollo*, *Get it Up Or Turn it Loose/Clap your Hands, Stomp Your Feet*. Dynamic Correttes—*Funky Music is the Thing*, Isley Brothers—*If You Want To Get Something*, Bra—*Cymande*, Foghats—*Slow Ride*, Grand Funk Railroad—*Inside Looking Out*, Dennis Coffey—*Son of Scorpio*, Jeannie Reynolds—*Fruit Song*, Trouble Funk—*Pump Me Up*, Ralph McDonald—*Jam on the Groove*, Sweet Tee—*Vicious Rap*, Grand Master Flash and the Furious Five—*The Message*, Kool Herc—*Planet Rock*, Kraftwerk—*Trans Europe Express/Numbers*, Bambaataa—*Play at Your Own Risk*, Kutis Blow—*Christmas Rappin*, Blondie—*Rapture*, Alan Vega—*Saturn Strip*, DJ DST—*Rock It*, Malcom McLaren—*Buffalo Gals*, Rockers Revenge—*Walking On Sunshine*, Taana Gardner—*Heatbeat*, Yoko Ono—*Walking on Thin Ice*, Company B—*Fascinated*, Peech Boys—*Don't Make Me Wait*, Sharon Redd—*Can you Handle It*, D Train—*You're the One for Me*, Funk Masters—*Love Money*, Farley "Jackmaster" Funk featuring Darryl Pandy—*Love Can't Turn Around*, Steve 'Silk' Hurley—*Jack Your Body*, Phuture—*Acid Tracks*, Visage—*Frequency 7*, Juan Atkins—*Let's Go* (Derrick May remix), Kreem—*Triangle of Love/Just Another Chance/The Sound/Rock to the Beat*, Kevin Maurice Saunderson—*KMS*, Rhythm is Rhythm—*Nude Photo/Strings of Life*, Inner City—*Big Fun/Good Life*, Joey Beltram—*Energy Flash*, Primal Scream—*I'm Losing More Than I'll Ever Have*, Andrew Weatherall—*Loaded*, Double Dee and Steinski—*The Lessons/The Motorcade Sped On*, Cold Cut—*Beats and Pieces/Paid in Full/Doctor in the House/People Hold On*, Baby Ford—*Oochy Koochy*, KLF— *Doctorin the Tardis*, Royal House—*Can you Party*, Todd Terry Project—*Weekend/Bango*, Sasha— *The Remixes/Alexander Coe*, Imagination—*Instinctual*, Michael Jackson—*Scream* (Morales Remix), U2—*Even Better Than The Real Thing* (Paul Oakenfold remix),

Prince—*Signs of the Times*, George Michael—*I Want your Sex*, Renegade Soundwave—*The Phantom*, Ralphi Rossario—*You Used to Hold Me*, Thrashing Doves—*Jesus On the Payroll*, ATFC—*Bad Habit*, Joey Beltram—*Mentasm*, Wooden Tops—*Well Well Well*, Gerald Simpson—*Voodoo Ray*, Altern 8—*Active-8*, The prodigy—*Charly*, Smart E—*Sesame's Treet*, SL2—*On A rags Tip*, Omni Trio—*Renegade Snares*, Deep Blue—*The Helicopter Tune*, Goldie—*Timeless*, DJ Billy Nasty—*Journeys*, Paul Johnson—*Get Down*, Mousse T—*Horny*, Gaspard—*Good Enough*, Cher—*Believe*, Daft Punk—*One More Time*, Mylo—*Drop the Pressure*, Lil Louis—*French Kiss*.

Versions

"A version is a record with vocals removed, an alternative cut of a song made to let a deejay toast over the top" (Brewster 2000, 117).

Death in the Arena, Water Pumping, Shank-l-Sheck, The Champion Version, Under Me Sleng Teng.

2.0Interview Questions

This is a list of indicative questions that may change depending on the interviewee's responses.

I will commence the interviews by stating to interviewees that although I have set questions, they do not have to answer them if they feel uncomfortable or if the answer reveals trade secrets that contribute to their particular sound and that they need not disclose such information. I will also make them aware that I will acknowledge their contribution to my research and will show them the context of their contribution and state that they are free to modify their response or ask to remain anonymous if they so wish.

General

Do you feel that Dance music has anything to benefit from Rock music?
Are there any instances where Rock music has used Dance music techniques effectively?
Would Rock discos benefit by utilizing the extended Dance form?
What Dance tracks that utilise Rock elements do you feel are effective?

Dance Production

What production techniques do you use in Dance music?
Describe how you build tension in a Dance track?
How does the instrumentation (stratification) help build excitement?
What equipment do you use and what advantages has it to your professional practice?
What structure do you use in a standard Dance track?
What Dance music do you work with and why?
What equipment do you use in production and why?

Composition

What is composition?

How do you compose?

What end result are you aiming to achieve?

Are the surroundings important when you do compose?

What difficulties and benefits do you find when recording yourself?

How do you feel about your own compositions?

Are there any instances where you can identify a good moment to write?

What do you like about your genre?

What production techniques do you use in composition?

Describe how you build tension in composition?

How does the instrumentation (stratification) help build excitement?

What equipment do you use and what advantages has it to your professional practice?

What structure do you use in a standard Rock track?

What artistes do you work with and why?

What equipment do you use in production and why?

What technical devices are utilised in composition?

What techniques do you use to build excitement?

Would you like to compose other forms of music?

Do you think Rock music could benefit from being less confined to the pop format?

What compositional triggers do you use live or is the structure set?

Does the band have compositional cues that change sections of songs during performance?

What determines when a sectional change occurs?

What challenges have you encountered while using song cues mid performance?

Does the band use any novel compositional change devices like set sounds or phases?

Do you think extended Rock music died in the 1970s?

Do you feel that Rock bands are flexible enough to adapt to audience needs?

Do you use sequencers with the band live?

Pre-Production

What time management techniques are used in the recording session?

What pre-production is used before the recording?

How do you ensure the recording project meets the expectations of time, money and creative outcome?

Rock Band

Do you think Rock music could benefit from being less confined to the pop format?

What compositional triggers do you use live or is the structure set?

Does the band have compositional cues that change song format during each show?

What determines when a sectional change occurs?

What challenges have you encountered while using song cues mid performance?

Does the band use any novel compositional change devices like lights, set sounds or phases?

Do you think extended Rock music died in the 1970s, and if so, why?

Do you feel that rock bands are flexible enough to adapt to audience needs?

Do you use sequencers with the band live?

DJ

What technical devices are utilised in the DJ profession?

What techniques do you use to build excitement?

Describe the term “peaking the floor”?

Would you like to see other forms of music become DJ friendly to allow the music to be mixed in Dance fashion?

3.0 Journal

3.1 December 2010

Date: 10:12:10. *Brisbane Records*

Engineer: Tim Whiteman

Tim Whiteman recorded a MIDI drum pattern for *Little Jo* at a tempo of 118 derived from the original demo. I recorded a rhythm guitar to the bed through my Marshall JCM900. The quad box was recorded at low volume without adjustment to the standard amp settings. A Shure SM57 was used close to the speaker pointing to the edge of the 12-inch speaker cone. A Matra-Vase Skunk was running in parallel but had a distant sound and was rejected. One advantage the Marshall had was that it was close to the carpeted floor. The 50-Watt Skunk was raised on a cabinet and was located in a tiled section of the room. We had limited amount of spill from the monitor speakers but recorded using the far speaker to bring the spill back further. We achieved a good rhythm guitar sound straight off with no adjustment needed to the standard settings on the amplifier. I took photographs of the microphone placement and amp control positions: Volume 1, Reverb 3, Presence 5, Bass 5, Middle 2, Treble 3, and Lead Gain 10. The lead guitar sound was a lot more difficult. Firstly we did not get a good sound and secondly there was not enough differentiation between the rhythm and lead guitar sounds. It was decided that we would attempt to record the rhythm and lead guitars as one guitar part rather than overlay them on top of one another. I was happy with the idea of a one guitar presentation. After the first rhythm part was recorded I played another for each side of the stereo field to create a mono-deluxe guitar sound imitating the Sex Pistols, *Never Mind the Bollocks* production. This was a little more difficult for *Little Jo* because of the riff which needed to be tight on each note. The sound worked in stereo and even the inconsistencies added to the stereo experience. When this was reduced to mono we found that it was a little confused and lacked definition. To be powerful *Little Jo* needs the riff played to be orchestrated to work in mono and stereo. The format for *Little Jo* was slightly modified from the one mapped out for the session; the first breakdown was reduced to six bars instead of eight with power chords every two bars. At the end of the day Tim played some Dance tracks. I did not feel we had enough release at the breakdown section of *Little Jo* and possibly others that had been reformatted. Before the next session we will be looking more at the Dance format and what will be needed to make the project work. The new format of ClubRock might not be a mirror of the Dance format but will use Dance music to develop a working model for ClubRock.

Date: 14:12:10. *Tim's Studio, Lucan Ave, Aspley*

Engineer: Tim Whiteman

I brought the Marshall, SM57 and guitars over to Tim's studio. We recorded two formats, *Asteroid B-612* and *Get Lucky*. The guitar sound had a more distant sound than the previous session at Brisbane Records. The environment was more reverberant and the sound was less defined—a sound that might not be able to be used on the final product. It would be worth spending more time engineering the initial sound. I am interested in having the sequenced drums and guitar for accompanying overdubs. I used the Gibson Les Paul Junior for the entire rhythm guitar recordings.

Get Lucky was recorded in mono-deluxe; *Asteroid B-612* employed a single guitar for the rhythm. It was decided to record the rhythm guitar first for all songs—this would reveal the format that we are interested in. We talked about format before the session and will do the same on subsequent recording sessions. I learnt about the mix-break and the breakdown at the front of the song. The mix-break is useful for the segué between tracks and the breakdown gives some deconstruction and relief to the track. I am tending to put a bridge between the verses of eight bars. I did not have any precedent for this and do not know how the bridge will be filled. Without these middle eights the song would be a little rushed. *Get Lucky* and *Little Jo* have power chords through the eight bars and this worked effectively. As a production team we achieved a lot and worked quickly. The studio functioned very well but we were a little fatigued by 4 PM.

3.2 January 2011

Date: 07:01:11.*Tim's Studio, Lucan Ave, Aspley*

Engineer: Tim Whiteman

Expecting to be recording Christo's (Chris Fletcher) vocals, I took everything to record vocals and brought all the guitar equipment in case he did not make it and this was fortuitous. I borrowed Turbo Niko's (Boondall Boys' drummer) 2-watt amp and took the line out into my Fender Deluxe which had the advantage of having reverb. I did not note the settings but backed off the gain to give the sound a firm base and "let it rip". It was not overly loud—just right to hear the amp and the monitors. I recorded all the songs we had—just the main lead solo of each. I needed to wait for the vocals before any infill was to be recorded. I did bring the Marshall and quad box but did not use them on the solos.

I played the Stratocaster for all the solos and both rhythm and lead pickups were used. It felt good to have the warm rhythm pickup for the solos if needed. The day of recording was not fatiguing on the ears. I was very happy to have some lead work recorded, and I was also happy with my playing. I had to work out all the lead lines from scratch and Tim was very patient. For the vocals I brought the preamp and Digidesign 002, two Rode NT2 microphones and stands, pop screen and leads. I plan to record the vocals in stereo and to create a slight movement from side to side through the delivery. We will see if this works. Christo and Matt Oliver (Splatterheads bass player) were waiting for steel in Stanthorpe so we arranged to record the week I return from Cairns.

3.3 February 2011

Date: 10:02:11. *Tim's Studio, Lucan Ave, Aspley*

Engineer: Tim Whiteman

John (Macka) McKeering (Boondall Boys' lead vocalist) came to the studio and sang *Get Lucky*. It did not take long and I had set up the compressors and Digidesign 002 with Tim during a practice session beforehand. I did have to change the performance area to the more absorbent backroom as the workshop acoustic was not defined enough in the bottom end. The vocal worked out well in the new space. The key signature was a little high for John but the push served the song well. The vocals took half an hour and it was good practice for dropping in and playing back. The vocal pulled together the project as a whole. Christo will arrive on Saturday to sing the rest of the songs including *Get Lucky*. I will need to remember to bring a DI box for the bass guitar for the next session. The bass will go through the compressor with pre-emphasis to bring up the high frequencies.

Date: 12:02:11*. Tim's Studio, Lucan Ave, Aspley*

Engineer: Tim Whiteman

Christo and Matt came down from Stanthorpe for a recording session at 7 PM. *Get Lucky*, *Little Jo* and *Asteroid B-612* were recorded pretty easily. We recorded vocals with the Rode NT-1 and a SM57 together two inches apart with a pop screen in front. I found no phase problems in the recording technique. Some movement between left and right in the stereo field was pleasing to report. The last three songs *The Most Kissable Lips*, *Now It's All Gonna Change* and *A Summer's Day* were a little more complicated. The songs had not been played before other than as a demonstration.

A Summer's Day was not too bad because we had the words written down and we could adjust the recording. For the last two songs we needed to write down the words before we could sing them. The hardest part of all the songs was finding the start of the singing. If we were organised before the session this would have been fixed prior to recording. We also had one problem in *Little Jo* where one chorus was cut short by one line. *The Most Kissable Lips* had a similar problem where we had to leave out the hook line between the first and second verses but this seemed to improve the song. Overall recording the vocals made the project more complete and more workable because of the opportunity to see the end result and work around the vocal lines with the instrumentation. Tim stopped the session at midnight and Christo and Matt drove back to Stanthorpe.

Date: 24:02:11. *Tim's Studio, Lucan Ave, Aspley*

Engineer: Tim Whiteman

I recorded lead guitar overdubs around the vocals which are now recorded. We tried the small 5-watt amplifier but it sounded too small; the Fender-Deluxe on double saturation sounded better. We directed the microphone a little more towards the centre of the speaker cone and this changed the result from a small radio sound to be brighter and more defined sound. This difference in distance was only small—about an inch-and-a-half. We first tried the Les Paul Junior but that did not differentiate from the rhythm sound, the Stratocaster did a wonderful job of providing a different timbre. We recorded *Get Lucky*, *Little Jo* and *Asteroid B-612* before we ran out of time. We managed to unearth guitar parts that filled the breakdowns in the middle of the songs. I have not thought about the starts and ends but it was nice to hear the middles filled in. I was happy with the result and look forward to next time. We recorded the amp settings to make it easier to reproduce and it will only take one more session to finish the guitar parts. The project is ready to invite bass players and drummers to finish off the demonstration.

3.4 March 2011

Date: 09:03:11. *Tim's Studio, Lucan Ave, Aspley*

Engineer: Tim Whiteman

I recorded lead guitar overdubs around the vocals on all the three remaining tracks. Chris Fletcher and Matt Oliver were due to come down on Friday but will now come next week.

I decided to record some bass in preparation for the drum session on the Friday. A demonstration mix of each song was bounced down for Dan Sugars (drummer) and for a meeting with Mike Howlett the following day. We recorded all the tracks with the Fender Deluxe guitar amplifier and with the same settings with the microphone roughly in the same position as our last session. We were happy with the guitar sound. I had recorded all the songs except one line when I realised that my tone control on the lead pick-up was totally down. This dramatically changed the sound. On *Get Lucky* I liked the sound better with the tone down. It gave the guitar a different sound from the main lead-break and 'toned it down' as it were—it was quite bright with the tone up. I gathered all my equipment to bring home and this session will probably be the last needed at Tim's place.

Date: 11:03:11. *Gasworks Studios*

Engineer: Tim Whiteman

I went in a little ahead of Tim and set the studio at 10.30 AM. I had a look at the signal flow of the desk in regards to the twenty-four track machine and the Cubase session. We were able to bring up eight I/Os out of the sixteen in the assign window. We played Cubase back through outputs one and two and recorded the bass guitar direct. I did want to be able to send to Cubase through the fader and monitor the channel independently but this was not possible so I used the direct out and duplicated the input channel for the monitor gain. You could hear sample delay coming from the DAW so it was better working with the direct signal. The studio was good to work in and the Barefoot monitors were very transparent. I recorded bass on all the tracks and this was because the vocal and bass session was postponed until next week. It did give us a rehearsal on the workflow and some tracks came up fairly well. I do not expect to keep any of these bass tracks but as a demonstration it was successful. Work is still needed on preparation for a Boondall Boys session on the twenty-sixth of March which will have the whole band, including the singer, recorded live. I want to record this without the aid of headphones and will bring in a small PA for this purpose. This will be an interesting day. The headphones will be set up in case I am unhappy with the bleed in the main room. This technique was inspired by recent demos and releases the band had done recording with an eight track cassette format. The vocals being recorded live is an extension of the idea. The live 'feel' caught on the 8 track recordings was the main inspiration especially the feel of the instrumentation and the rhythm section. There is no reason why I cannot record the vocals live other than excessive guitar levels and these should be able to be contained to a certain degree before the feel of the music degrades.

Date: 18:03:11. *Gasworks Studios*

Engineer: Tim Whiteman

Tim and I went to the studio and set up the headphones and microphones for the vocal session with Chris Fletcher. We put the Moog in the performance room and made it play a continuous drone while we set the signal flow for the session. Matt Oliver (Splatterheads bass player) came and recorded *Asteroid B-612*. Christo said he was not ready to record the verses of *Now It's All Gonna Change* but we did record the chorus which gives an indication of how the song will sound. We ended up doubling his part which only took a couple of minutes. I envisage that the chorus will have high voices from Simon Faulkner. The vocal sounded good in the main room without too much modification, we used a U87 and pop screen with the SM57 as second. This technique creates some differentiation between left and right speakers in the stereo field and is a safeguard if one microphone "pops"—I can copy the other microphone's recording over the problem.

The bass-lines were good and one breakdown bass part worked very well. Matt is still a little loose for the project but it was good to have him involved as he and Christo both came as a set. The patch-bay was very hard to decipher and we will need to spend time on this aspect. Gasworks House Engineer Tristan Hoogland dropped in and we discovered we needed to enable mix-to-tracks for Pro Tools to record simultaneously to the tape machine. This will engage the Channel Fader for Pro Tools while the Channel Level will adjust the multi-track machine. Tristan had a look at the Cubase I/Os but we could not get it to see more than eight tracks. Having thought about the limitations it is possible to subgroup a drum session down to eight to record into Cubase but we decided to work with Pro Tools. Matt and Christo came back for dinner and a sleep before collecting building materials and heading back to Stanthorpe.

Alex Smith (audio professional) will be remixing the track at some stage and at that session, I should have the beginnings of what we now call ClubRock. Once the drum tracks for the metronomic compositions have been recorded we will be able to invite other practitioners to produce ClubRock remixes. The individual drum patterns will be sequenced to produce a tighter experience and then the songs will be extended for the dance floor.

3.5 Boondall Boys

Date: 26:03:11. *Boondall Boys recording Get Lucky and Hair Dinkum at Gasworks Studios*

Engineer: Tim Whiteman

We spent Friday setting up the studio for the session. At first we segregated the amps but on the day we needed a more open arrangement to enhance the feel for the drummer and the band. We were a little tentative on the patching requirements at first but settled for the tape and Pro Tools to be sent off the same pot with playback patched to the mix faders. We decided to use the right side of the mixer for playback rather than monitoring in-line down the input channel. The session went well and it was easy for the band who were also very happy with the sound. The unaligned tape machine performed very well indeed. I particularly like the sound of the bias as it dropped over tracks and this brought back some nostalgia. It also renewed a preference for the analogue approach. One aspect of the session was the overhead microphones—a coincident pair over the drummers head is my usual practice. On this occasion I had SM57s with KM184s taped on top. The SM57 was to give '*shhh'* sound rather than the '*ssss'* sound of the condenser microphones. I recorded both just in case.

The kit was all recorded with SM57 for off axis integrity. A C451 was used on the high-hat, a perspective I do not usually require but it sounded very nice in the mix. I had an SM57 on the beater side of the kick drum and I was very happy with this placement. An SM57 an inch away from the head inside also worked well. We did have a Shure B52 in the traditional place, just outside the hole—but this sounded very distant (probably in comparison to my inch-and-a-bit placement on the other two 57s). To replace this microphone I put an omnidirectional U87 with its head just inside the kick drum. This gave a pleasing result but we will know more at mixdown. The best part of the drum sound was the two C414 microphones spaced one metre apart, two and a half feet from the roof, pointing a little out and a little down. This opened up the drums to such an extent that I have incorporated this in my drum overhead philosophy. The bass guitar had a microphone and two Di boxes—one pre-effects and one post. The guitar amps had an SM57 and a Sennheiser MD 409. The 409 sounded far better than the first attempted U87 and it would be good to own a couple personally (it even has a label to indicate the front of the microphone which was a problem with the D12). Vocals were going through my PA in the room and the whole band could perform very well because of the guide vocal. It worked out that we could mute the vocal and I could not hear any bleed. We started at 11 AM and worked until midnight and had a pizza break in the middle.

Boondall Boys guitarist Solomon had a very good lead sound and I recorded my lead parts through his JCM 800 combo and made them up on the spot. The band was very encouraging and I was pleased with the result. I felt really comfortable recording the lead parts and was in my element. I used my -15dB earplugs under the headphones and this was effective—I felt refreshed rather than ear-strained the next morning. The only part I need to consider redoing is the riff in *Hair Dinkum*; I felt it needed to be cleaner to be stronger. We have one track left to record vocals on, over the top of the guide vocals. Solomon's and my lead parts were on one track and Tim went around Solomon's recorded tracks effectively. If I need any other tracks I have the pre-effects bass DI, high-hat and spare overheads I can use, having six overhead microphones. The concept of recording all twenty-four tracks initially and taping over ones I do not need worked really well. The same care in preplanning is needed but a little more experimentation is allowed. The studio is occupied next week so the mix session will take place after a week interlude. Macka commented that he liked what was done to the revised format of *Get Lucky* and that was encouraging.

Date: 25-26:03:11. *Boondall Boys at Gasworks Studios*

Engineer: Tim Whiteman

The mix session still needed main vocals and Solomon's guitar before a mix could be attempted. The backing vocals sounded dreadful because they were recorded in the main room with the accompanying reverberation. The vocal session was organised through the day and Macka recorded both vocals in one take. We achieved a firm vocal sound by recording it in the control room with headphones. The vocals were very tight and well defined over the whole frequency range. I used a U87 and an SM57 together and these were panned hard left and right. We recorded Solomon's guitar again on both tracks and the sound through the studio's JCM800 was as good as his JCM800 combo we originally used. We (Solomon, Macka and I) also re-recorded the backing in the control room with better results than the night before in the main room. Everybody left at lunch and we started to mix at three o'clock. I had Tim with me so I explained some of my mixing technique as we went. I started with the kick drum -10dB down so the whole mix would come at 0dB. It turned out I used -14dB and came out a little short, but when we compressed the final and used the gain makeup to adjust the input into Pro Tools it matched perfectly with the master fader at 0dB. I explained the technique of lifting the vocals at the front of verses for the psychological impression of being able hear the vocals without extra overall level.

We mixed on the Auratones and referenced on the Barefoots to align the bass to our reference track, in this case *Never Mind the Bollocks*. The bottom end might need a little tightening because of the loose nature of the reference but it was a good fit. I recorded the master on Pro Tools 24 bit, 96 kHz to be cut directly to vinyl. Mastering on quarter inch tape did not seem appropriate and I was very happy with the mix from Pro Tools which is to be expected. I recorded two versions of the mix, one with the U87 and SM57 on each side and one with the U87 in the middle. I did not have access to headphones on the mixing console so it was difficult to centre the twin vocal but the twin stereo vocal did add a lot of space to the centre image. The vocal was mixed with very little reverb and this was the only use of reverberation in the entire mix. Equalisation was used on the drums and bass, possibly some on the vocals, high pass filters were applied to most tracks. The Decca spaced pair was used in conjunction with the overheads which were put in mono. The tom microphones were left open with a sixty-degree spread and they lifted the drum sound—I usually find they detract from the overall sound and tend to mix them in only for the drum fills. The clean bass guitar DI was used in preference to the fuzz feeds and required compression to sit in the mix. We mixed *Get Lucky* with an instrumental version—drums only, guitar only and vocals only. I almost did a mix without the bass but it was getting late. This was going to be utilised for a sequenced real bass version. The songs will still need to be mastered and I almost limited the track to master but was losing the ability to differentiate sound accurately and decided against it. In the mastering session I will need to bring the peak information down to make it easy to cut (master) at volume.

3.6 April 2011

Date: 8:04:11. *Boondall Boys at Gasworks Studios*

Assistant Engineer: Tim Whiteman

When I heard the Boondall Boys mix a week later upstairs it was lacking in guitar level. Tristan explained about the main studio's acoustics and anomalies for mixing; this was very helpful in planning the next session. Once explained I realised that I had not heard my reference CD so tight before—Living Colour, *Love Rears its Ugly Head*. I did sense that the balance on the Auratones was critical at the time of mixing and felt I was not able to fine tune the vocal, guitar and drum balance, mainly due to time constraints and the inability to concentrate in company. The bass was not a concern because it was mimicking the reference and sat well in both rooms but the mid balance was a concern and needed significant attention.

For this mix I used the studio baffles to reduce the size of the room and to create a more dead-end/dead-end [sic] approach. The monitors were moved forward and this made the main difference. I mainly worked on the Auratones for mixing and referenced on the Barefoots for the bass and high frequency balance. We then recorded a CD and heard the track in the studio on a portable CD player. It took a few times and a few CDs to get the music-to-voice right. An intermediary stage was the mono playback through an old cassette radio player—reducing the stereo to mono through the interconnection. On the second mix day I produced *Hair Dinkum* and *Get Lucky*, we invited the band to preview the mix. *Hair Dinkum* had dual lead parts and I had concerns if the track had room for both. The introduction of members of the band was important to establish a generically acceptable mixdown. I came in at 10 AM and Sean Tracey (my cousin and bass player) arrived after work and Macka arrived after we mixed *Hair Dinkum*. I had spent hours fine tuning a mix and balance on *Get Lucky*.

By the time Sean came I had mixed *Get Lucky* and had a mix of *Hair Dinkum* fine-tuned and finished ready for John to listen to. Sean did not like the *Get Lucky* mix and I was able to remix this to Sean's satisfaction quickly—he wanted more guitars. The only problem discovered later was that the balance was very casual to the point of unusable. I still have trouble with the riff in *Hair Dinkum* and prefer a cleaner riff. The build in *Get Lucky* is played badly and I would like to replace this. Both these lines are mine and would not be that hard to replace. I am still to listen critically to *Hair Dinkum* and to send a mix to the band. Without too much debate I feel I will need to mix both tracks again. Now that I have the band's perspective I should be able to use that to create a mix that is both technically correct and fits the expectations of the band.

Date: 23:04:11 *Drum and Bass on ClubRock at Gasworks Studios*
Assistant Engineer: Dan Sugars, Tristan Hoogland, Alex Smith and Craig Desilets
Artists: Dan Sugars (Drums), Phil Dunlea (Bass)
The first session of ClubRock in Pro Tools started at 10 AM. Alex got lost and Dan needed breakfast. I started setting up the drums and Dan placed the stands before he left to eat. The drum production was standard for me, SM57 as the main drum microphone, and I have one microphone on the beater side of the bass drum and one inside both an inch and a half away from the skin. I had an MD421 in the kick as I favoured its mid-range boost and I preferred it over the SM57.

I used KM184s for overheads as a coincident pair over the drummers head pointing down to the kit with ≈ 110 degrees and 20cm spacing. I also incorporated the Decca tree with three C414s all with a cardioid configuration, one spaced well forward pointing at the snare just above the cymbals with the other two a metre apart pointing slightly outward and much higher (a foot from the roof) so the bracket was pointing down at the front. A C451 was placed on the hi-hat, the toms all had SM57s as did the snare top and bottom. The Vivid Colour reference track had a kick drum that sounded like a beater hitting a hard object. This reminded me of a house engineer at Festival Records in Sydney who secured a fifty-cent piece to the bass drum with a wooden beater to produce a loud 'clack' in the studio. This sounded like a 'clack' in the control room but was equalised to produce a very flexible and very punchy bass drum. I had not used this technique before. When I heard my kick drum I went for the beater microphone to give me more slap, I then decided to try using the coin technique I had seen in the late eighties.

It worked very well and Tristan introduced 63 Hz on the sound and it was powerful and had heaps of bite. I did not need my beater microphone. In retrospect I should have placed another microphone in the middle of the kick to give a smooth round sound for convenience in the control room as this kick drum produced by the plastic beater hitting a gaffed 20 cent piece was a little too solid for long periods of critical listening. The bass was directly injected into Pro Tools through the analogue console, once from the amp via a dbx 160 and another straight from the bass guitar direct. Both sounds fitted nicely with the track. I did some work to achieve a tom sound that sat above the other instrumentation and this worked to some extent. I was happy with the sounds produced.

The ability for the bass and drums to be recorded together made a big difference to the end result. It took a long time, longer than I would have liked but in normal circumstances I would have set up the studio the day before and prepared the routing. I did miss having Tim as an Engineer but a number of people stepped in; Alex, Dan and Craig from JMC, Tristan and Dan Sugars helped. I had to do some engineering which was not ideal. It is envisaged that the drum phrases will be cut up and sequenced to make a tighter listening experience before the songs will be extended for the dance floor. The drum tracks will be first mixed to create easy editing.

3.7 May 2011

Date: 11:05:11. *Gasworks Studios and M Block QUT*

Assistant Engineer: Tim Whiteman

I tried to record over mistakes on the rhythm guitar on *Asteroid B-612* and *A Summer's Day*. We had the same head with a different speaker box and a different room—it sounded nothing like the original. I ended up editing *Asteroid B-612* and leaving *A Summer's Day*. The rhythm guitar sound in *Little Jo* has some merit—it is clear and well defined. I am less convinced with all the other rhythm guitar tracks. Recording these tracks again sets me back a little but does not stop me recording vocals and working *Little Jo*'s lead solo.

I mixed a pre-production version of the tracks for work with Ableton Live this week. Overall I was happy with the drum sound and the bass guitar we recorded with Dan and Phil. This has made a substantial positive psychological impact on the project. I also mastered a copy of *Hair Dinkum* and *Get Lucky* for Brisbane radio station 4ZZZ FM the day before. The loose mix of *Get Lucky* I did for Sean with the guitar levels up seems to be the best mix so far. I will need to have a more balanced version in the future. On the sixth of May I spent time mastering in the Control 24 studio at QUT Kelvin Grove and I adjusted the overall tonal balance. I worked with the versions I mixed at Gasworks Studios on the eleventh of May. *Hair Dinkum* worked. The Boondall Boys session gave me an indication of the feel I will need to create on the ClubRock tracks which I envisage will be clearer in presentation but will still need to express the energy portrayed on the Boondall Boys recordings. Tim and I looked at the tracks in M Block on Friday the thirteenth of May and ordered the sessions and made some production notes. The BPM and length of the tracks are:

Title	**BPM**	**Duration**
The Most Kissable Lips	193 BPM	3:15 min
Now It's All Gonna Change	167 BPM	3:28 min
A Summer's Day	164 BPM	3:58 min
Asteroid B-612	183 BPM	4:04 min
Little Jo	118 BPM	4:00 min
Get Lucky	173 BPM	4:24 min

In some cases, *Asteroid B-612* as one example, the electronic high-hats that we recording as a guide sequence on Cubase sounded good as an extra percussion instrument. The Decca tree had the middle microphone sometimes first and sometimes last in the three microphone set, this caused some confusion and was rectified in preparation for mix down. If I can get Alex to start programming *Little Jo* I will be able to fix the other tracks as the project moves ahead. It is at this programming stage that I want to document the development and conduct interviews.

Date: 20:05:11. *M Block QUT*

Assistant Engineer: Alex Smith, Tim Whiteman with Ableton Live

First session with Ableton Live had promise. We loaded *Little Jo* from the Pro Tools session converting the mono file into stereo interleaved files. The drums were mixed previously to a stereo file to enable this operation. The tracks included drums, bass, two rhythm guitar parts, lead fills, solo and vocals. The tracks were then edited so that they started on the first beat of the bar—this worked for the instrumentation but lost the feel on the vocals. I suggested on subsequent sessions that we bounce the vocals out of Pro Tools the bar before if the vocal starts early and at the start of the bar if they start late, to retain the syncopation in the delivery.

The drums were looped with the guitars and it was obvious that we could create some very original arrangements from existing material. Ableton Live can loop from any point in the track and this function creates new musical variations. The lead-break could be artistically modified for the better by incorporating loops within itself and could be creatively reconstructed with ease. One demonstration that we took on board directly was the idea to sample the drums individually rather than using bars. Alex demonstrated this by taking samples out of the mixed drum track and it sounded very good. The snare in particular had a nice shortened envelope and sounded firmer.

We then imported the separate drum samples at the end of *Get Lucky* so we could use clean drum samples. These had been recorded with all the drum microphones open so that they would fit in with existing mixed tracks. This enabled us to use complicated drum fills to be imported as bars and then to be able to drop back to the individual samples without any sonic difference.

Tim stated that the idea of sampling myself was a unique concept because people usually sample other people or play the track themselves. This could be worth investigating though I doubt it would be a totally new concept. It felt very exciting actually hearing the possibilities and it will not be long before I will be able to demonstrate the ClubRock concept sonically. Alex engineered the session and made some quite original variations to the track and demonstrated Ableton's power to create ClubRock. It did sound like Dance music when we finished which is not the aim of the project. Now Alex has the files to reconstruct the track using loops before we start incorporating breakdowns and embellishments. This will give us the opportunity to create a very tight Rock track with the twin rhythm guitars sequenced together thus eradicating all timing anomalies.

Date: 27:05:11. *Studio C Gasworks Studios*

Assistant Engineer: Alex Smith, Tim Whiteman with Ableton Live

On this second session with Ableton Live we only had an hour with Alex from 4.45 to 5.45 PM. In this time we put the drum mix-break at the head of the track for sixteen bars. The bass introduced the track for eight bars and then the guitar had eight bars before the vocal comes in. It was at this point we stopped but it was a good indication of the process. The idea of using individual drum samples did not work. The feel of the kit as a whole was so much better than the individual samples. We ended up looping eight and sixteen bar sections to retain the individual nuances in the bars. It took a little adjustment of samples to get the stereo sequence of the rhythm guitar and at first we had the left side as a one bar sample and the right as a two bar sample. They did fit together well but we experienced some distortion on the right hand guitar track and the cause has not yet been determined.

3.8 June 2011

Date: 4:06:11. *Brisbane Records*

Assistant Engineer: Tim Whiteman

Chris Fletcher came over to Brisbane Records on the way home to Stanthorpe. We recorded vocals on *A Summer's Day, Asteroid B-612, Get Lucky, Now It's All Gonna Change* and *The Most Kissable Lips*. These were recorded with the Rode NT2 and the SM57. I am using the condenser microphone in the mix and the dynamic microphone is used for contingency. The two microphones sound surprisingly similar especially in the track. The session went very well and Chris Fletcher said he felt very comfortable in the environment while recording with only the two of us.

The room sounded good and I compressed the vocal with pre-emphasis before it was recorded into Pro Tools. I have waited a long time to have the vocals completed on the first half of the project and this was a big relief. The main reason for the timeframe was the geographical distance between us both. I finished the guitar on the project recording rhythm on *A Summer's Day* and *Asteroid B-612* and lead on *Little Jo* and *Get Lucky*. We left the guitar set up for the rhythm sound and I doubled *A Summer's Day*, *Now It's All Gonna Change*, and *The Most Kissable Lips*. I used the GT-8 guitar process to affect the guitar going into the amplifier—it did not have any effects active but it gave the input a little more drive, enough to allow me to use the clean channel of the Marshall JCM-900 with the pre-amp on full, to achieve a heavy but fairly clean rhythm sound.

3.9 July 2011

Date: 18:07:11. *Brisbane Records*

Engineer/DJ: Tim Whiteman

We started mixing ClubRock to demonstrate the compositions and added drums to the top and tail to facilitate the mix-break. The process of constructing the mix-break turned out to be a big turning point in the project. This was relevant because the differing tempos meant they might not have mixed together effectively.

Tim stated that because the drums sounded similar it made it hard to decipher the individual drum patterns and we will work on this differentiation. I used a high pass filter to do the job and this ended up working. Tim established some mix rules:

- Each mix-break will be one minute
- No bass lines are to be included in the front mix-break
- Mix-break drums need to be tight in regards to the sound

Tim gave some additional advice:

The drums need to be beefed up in the mix, using compression probably more than a Rock mix would. In recording sessions request the drummer to record eight bars of kick, then eight bars of kick and high-hat, eight bars of kick, snare and high-hat and then eight bars of straight time (32 bars). Then thirty-two bars of straight time for the mix-break. The first track order Tim chose was as follows:

Title	**BPM**
Little Jo	118 BPM
A Summer's Day	164 BPM
Now It's All Gonna Change	167 BPM
The Most Kissable Lips	193 BPM
Asteroid B-612	185 BPM
Get Lucky	173 BPM

A Summer's Day starts at 164 BPM. The happy medium is 180 BPM and this represents the tempo that the track will be played at for the set. If I realized the tracks were needing to be the same tempo to fit together I would have recorded them that way—I do like the sonic result of speeding them up and I am not so enthralled about the sound of them slowed down. If I could have all the tracks sped up to some degree that would be preferred.

Listening to the demo I found that *Little Jo*'s mix-break is out of time with the start of the song itself and the mix-break is a little short to mix with. More ambience is required at the end of *Little Jo* to help with the transition into *A Summer's Day* of 180 BPM. The mix tempo has been established at 180 BPM and tracks will be mixed up or down to match this tempo. I noted that *The Most Kissable Lips* could have an extension on the small breakdown in the middle. You can really hear the slowdown in the vocal of *The Most Kissable Lips*. It might need to be re-sung to stay at this tempo as the tempo has been reduced. We had to edit the drums in *Get Lucky* because of timing inconsistencies.

I commented that I like the double drums in the mix-break. It reminds me of Feargal Sharkey's *You Little Thief*. It was noted that this was something that Tim wanted to avoid because it sounded as if the DJ could not get the mixing right on. I would like to feature this effect in one mix-break, probably one with the same drumbeat.

Title	BPM	% Deviation
Little Jo	BPM 164	+11.5% faster
A Summer's Day	BPM 180	+9.8% faster
Now It's All Gonna Change	BPM 180	+7.8% faster
The Most Kissable Lips	BPM 180	-6.7 % slower
Asteroid B-612	BPM 180	-2.7% slower
Get Lucky	BPM 180	+ 4.1% faster

I made one mix of *Now It's All Gonna Change* into *The Most Kissable Lips* with the tempo change during the step-up and this enabled the track to retain its original tempo. Because it has a step-down in pace at its end this could also be used to change tempo into the next track. *The Most Kissable Lips* front drum-break's EQ and processing worked really well with the next track for the mix-break. *A Summer's Day* seems to have uncomfortably increased the Dance tempo—it is the first song that hits the nominal 180 BPM. The change seems a little too much. The mix-break in *A Summer's Day* could be four times as long to give the set a break. The pitch shift down in any song I find uninviting. This is most noticeable on the first demo of *The Most Kissable Lips* and we will need devices to build and change tempi throughout. I do not like how the drums before *Asteroid B-612* just stop and restart into the song. This is a Dance device but in this case it diminishes the dramatic effect of the two songs coming together.

3.10 August 2011

Date: 01:08:11. *Brisbane Records*

Engineer/DJ: Tim Whiteman

We extended the main breakdown of *A Summer's Day* and *Asteroid B-612*. Drums were taken out of *Get Lucky's* front mix-break. The breakdown in *Get Lucky* could be four more bars. Four bars seem to be the standard extension to the original compositions main breakdown. We started to lengthen the main breakdowns of the songs—some worked really well. We talked about the mix-break at the beginning and Tim gave me some tracks to listen to. I can enjoy the two tracks merging together and then the breakdown in Electronic Dance Music, I just have not heard it in ClubRock as yet. I talked of the possibility of doing some extended lead guitar sections to the songs that could be used as alternatives. We also talked about the instrumental sections that could be played in between tracks.

Date: 08:08:11. *Brisbane Records*

Engineer/DJ: Tim Whiteman

We worked on *Get Lucky* and made mix-breaks on the Boondall Boys version and extended the intro to include a blank verse—this could require additional guitar parts. It worked well but we did not use it in the next ClubRock mix. The new DJ set was recorded from the controller into Pro Tools and we needed to put it through the Focusrite compressor to eliminate the latency of the recording function in Pro Tools. I did notice a lot more digital artefacts and the mix turned out to be unusable. We still have the mixes prepared for Traktor (DJ software) and the mix can be recreated. It was good to go over the transitions with Tim and we are pretty much together on the mix-breaks. I realised after the session that Traktor internally bounced the previous mix and was not relying on the soundcard of the computer on that occasion. We will do an internal bounce of the mix in subsequent mixes. Tim could do these in his own time as he has the mixes on his hard drive. We did have a situation where Traktor was giving the tracks different BPMs to the tracks. This caused some concern at first but we were able to designate a BPM to each track and this facilitated beat-mixing between tracks.

Date: 10:08:11. *JMC Academy*

Lecturer: Colin Webber

On the tenth of August 2011, I presented my research to the third year audio students at JMC Academy where I currently lecture. I did this as part of the research process and to take the opportunity to interview twenty or so music technology students for their response to ClubRock. Ethical clearance forms were collected and the session was recorded to catch all the comments talked about in the presentation. New ideas evolved as I talked of the research, not only through the response of the recipients but as a result of my own free expression of ideas. The implementation of a discography of tracks that I have researched in the formulation of the project was something I mentioned but have not implemented. It was cited that “DJs playing Rock music usually make a pretty good mess of the transitions between tracks and that the genre is not easily mixed together because it lacks that extended form and is impossible to beat-mix” (Alex Smith, personal communication, August 10, 2011). After searching the Internet I found a number a remixes of Rock songs that would help with this situation. The difference with ClubRock is that they have been created specifically to function in this way.

The idea of being able to go to a Rock disco and have popular Rock songs to be mixed together was discussed. The need to make club versions of popular Rock music to assess how ClubRock works on the dance-floor was also talked about. The mix of *Whole Lot of Love* with *I'm a man* was cited as an example of Rock music being mixed together but I have realised that I have not recreated this mix and I felt it would be useful to demonstrate. It was discussed that double drums in Rock sounds fabulous but to a DJ it indicates that he could not get the mix together and that this point needs to be expanded in the exegesis. Listening fatigue was discussed in relation to Rock music having more harmonic content and that clubs usually have songs that allow you to catch your breath (Patrick Drake, personal communication, August 10, 2011). This was something I have not taken into account—I did mention that breakdowns were important to give the dancers relief and will investigate ear fatigue. Colin Webber mentioned that the tracks could be mixed at their most exciting point rather than just the breakdown (personal communication, August 10, 2011). This would break up the impression of single tracks combined with mix-breaks. It was stated that the compositions were recorded at different tempos which made it impossible to beat-mix without vari-speed. I also stated that the sound of vari-speed with pitch-lock was something that I enjoyed listening to and that I did not like the music sped down in any way. The increase in pitch seemed to add excitement to the music and the decrease in pitch detracted from the excitement of the track. Choosing different tempi did make it sound more like Rock music. The inclusion of the use of Rock music in EDM could worth documenting. Varying tempi as opposed to EDM's constancy in tempo is worth including. Colin stated that Rock music chooses the tempo depending on what is happening at the time where Dance music sticks to a few different tempi (personal communication, August 10, 2011). I mentioned that the project had no defined start or finish. I will discuss this in the exegesis about how it started, what was done and what is to do. I stated that I did not need any closure on the project. It was mentioned that this was a Post-Modern approach. I informed that class that alternative mixes from DJs will be implemented. I stated that I thought I was going to give the examiner a CD, but as a result of the Graduate Seminar class and discussing the project, I will consider presenting the project in a club. I talked of engineering the track for the specific club to best make use of the sound system. I talked of playing the music with two drum kits on stage to create ClubRock live at some time in the future. I prefer recorded music over live music and I need to discuss the association between the live context and the album release. If assessed in a club context the set will still be part of an album release.

The project is still at the demo stage and probably will be presented without being re-recorded and utilising the full gamut of research data and experience in practice. I realised the need to have the music available to co-researchers to comment online to progress the research.

Date: 15:08:11. *Brisbane Records*

I fixed the end of Boondall Boys *Get Lucky*, extended the break in *A Summer's Day*, extended the break in *Now It's All Gonna Change*. Added guitar stabs to the end of *Get Lucky*, extended the break for *The Most Kissable Lips* and extended the break on *Asteroid B-612*. I did not see any room for a chord break in any ClubRock songs. It did become apparent that I am making a Rock album rather than a track for the dance floor. It could be played on the dance floor but the process is for developing a unique Rock album. The joining together of the Rock compositions by using mix-breaks is creating a very hard hitting album one that has a different feel to the traditional format. The breakdowns are very necessary to give some relief to the constant guitar noise. The breakdowns replace the gaps found on the traditional Rock album. I thought about a release on vinyl with a blank second side for the specific purpose of inserting record noise onto digital recordings. Full length record noise would be a very useful tool. On the fifteenth, a demo mix was created on Traktor. I adjusted the mix for all the tracks before importing them into Traktor. I have not created a final mix for any track but I have a preliminary balance. The mix was similar to our second attempt but with new mixes and we let Traktor bounce the tracks internally.

Title	**BPM**	**% Deviation**
Little Jo	BPM 127.4	+8 % faster
A Summer's Day	BPM 180	+9.8% faster
Now It's All Gonna Change	BPM 180	+7.8% faster
The Most Kissable Lips	BPM 180	+7.8% faster intro
Asteroid B-612	BPM 193	+4.3 % slower
Get Lucky	BPM 190	+ 12 % faster

The new tempo was determined automatically by Traktor, sometimes halved. To beat-mix the track a decision will need to be made about the appropriate amount of pitch increase for each particular track. Pitch-lock was always applied to retain the original pitch.

This mix was put up on SoundCloud so that co-researchers could listen and comment. It was found that I had cut a lead-break in half and this was fixed and uploaded as a new track on SoundCloud on the eighteenth of August, 2011 (Mix 20110818). Chris Fletcher was the first to contribute and this was fitting as he was the co-writer. Some comments were about the mix but were still of use to the project. He commented on vocal level and having a pocket for the snare to be heard while retaining the guitar sound which he liked. He recommended the muted guitar in the main break of *Little Jo* could start at the beginning of the breakdown. I discussed this with him and it is possible that we could have more of them from where they originally start. Chris thought *Get Lucky* sounded too fast and that the lead guitar was starting to sound out of time. The guitar could come straight in on the second break in *A Summer's Day* instead of fading in. He really liked the transition between *Now It's All Gonna Change* and *The Most Kissable Lips*. My additional observations are these: *The Most Kissable Lips* could have the hook just by itself for four to six times before the drums come back in. *Asteroid B-612* could have more lead-break using the build that is on the track now to finish a slightly longer solo. I too felt *Get Lucky* was too fast. *Get Lucky* sounded a little harsh on the mix so I lowered the level in the next mix. It was noted that *Get Lucky* was pushed into the Traktor limiter to a noticeable degree.

3.11 September 2011

Date: 15:09:11. *Brisbane Records*

Keyboard Player: David Kershaw

After a meeting with Associate Professor Mike Howlett it was decided to push the composition to replicate the Dance format. I will utilise the Trance format as a basic guide as documented in the exegesis. Today I extended *The Most Kissable Lips*, *Now It's All Gonna Change*, *A Summer's Day* and *Asteroid B-612*. They all worked for the better and it brings the DJ survey to a more specific end. I can foresee that I will need guidance and support to create the finished product. I would say it has induced more meaning into the project as it moves away from the traditional Rock format. It creates more work but the product should sound substantially differentiated from the Rock album. I uploaded the tracks to SoundCloud for interested parties. On the thirteenth, I replaced the squashed ClubRock mix with a new track, (Mix 20110913). *Get Lucky* is now 7% faster—the fastest alternate mix that I got from Tim. He supplied a mix at 3%, 5% and 7%. The tempo change is apparent but not a big deal for the purpose of the demonstration. I have extended the formats on the original tracks and hope that I can maintain the excitement of the music.

The first mix formats sounded just right for the Rock audience but I would like to be able to spread the tracks out to create a sense of ‘air’. I started to notch the guitars for the vocals. I usually balance the tracks over a week or more but the bulk of the mixing will be done in one session.

On the fifteenth, I picked up David Kershaw from Virginia at 9.30 AM and dropped him at Stafford at 3.30 that afternoon. I recorded the keyboards into the Digidesign 002 without regard to the slight timing delay. Before the session I tried the Focusrite compressor to eliminate the delay but I was unhappy with the signal integrity. We recorded keyboards on each track and it made the whole project ready to mix as a Rock album. *Asteroid B-612* and *The Most Kissable Lips* had the keys playing the guitar riff and these tracks work rather well. In retrospect I should have had Dave record the guitar line on keyboards for all the tracks. This seemed very counter intuitive at the time as the guitars left no room for added instrumentation. The tracks that did have keys playing the guitar line will probably be used as textural blank verses. Some lines really made a big difference—the choruses on *Little Jo* are now sounding finished. The breakdown really benefited by the inclusion of the keyboard lines. I need to invite some Dance remix engineers to shape the tracks more like a Dance track. This seems outside my production aesthetic and I do not have the Dance background to be able to get the results I require. I thought a number of ClubRock mixes would be a good idea to show the fluid nature of the medium rather than one. This could confuse or dilute the overall result—the alternative is to present only the best mix. The second and final keyboard session was completed on the twenty-ninth of September.

3.12 October 2011

Date: 7:10:11. *Brisbane Records*

I did a mix of all the tracks ready for a more concentrated mixing session. I changed the formats and started to feel comfortable with the way the format is shaping. I looked at the trance format and even though they all turned out totally different, referencing them to this format unified the tracks. I listened to all the mixes and made a page of adjustments. I mixed the tracks first at Brisbane Records and then again with feedback from Chris Fletcher and Associate Professor Mike Howlett. I then adjusted the mixes at Gasworks studios.

The main problem with the initial mixes was the lack of bottom end. *Little Jo* was the only track not adjusted at Gasworks studios. I usually change the format every time I work with the tracks but now the formats are stabilising. I mixed the track over the three days—listening to the track and making adjustments. I feel that I have achieved a basic raw mix and a lot can be done now within that framework. The object of this mix is to give something to the DJs for the next phase of the research.

Date: 17:10:11. *Brisbane Records*
Get Lucky has lost one tom track and it was also recorded without one tom track. It sounds fine to me void of toms but I would like to locate the missing track. I might need to go back and locate the tom in an earlier session. The missing tom track at the moment has not a graphic representation on Pro Tools. Track names will need to be identified—dates for mixes and a code for the DJs. This will help store the data.

Chris Fletcher has stated that he likes the guitar level on the first mix and that it sounded dangerous. I could produce a more Detroit sounding mix in the final representation. On the seventeenth, I started the compilation of the mixed tracks. I am doing this before getting tracks back from the DJs. I will also experiment with time compression and mixing.

Title	**BPM**	**% Deviation**
Little Jo	BPM 164	+11 % faster
A Summer's Day	BPM 180	+9.8% faster
Now It's All Gonna Change	BPM 180	+7.8% faster
The Most Kissable Lips	BPM 180	-6.7% slower
Asteroid B-612	BPM 180	-2.7 % slower
Get Lucky	BPM 180	+ 14.1% faster

I made a mix-break for *Little Jo* where *Little Jo*'s riff was sped up and mixed into *A Summer's Day*. I was disappointed after this session that I had not tested the formats out before sending them off to the DJs. All mixes were recalled from the DJs.

Date: 21:10:11. *Brisbane Records*

I was able to hold off the DJs until I remixed the tracks. I need fewer guitars in the mix-break. I also would like the guitar level up in the mix. This came as a result of Chris Fletcher saying that he liked the first mix and now it is a process of replicating this first representation. Chris Fletcher visits next week so I will need to prepare the tracks for a mix session with him. Total length now is 25 minutes 29 seconds.

A Summer's Day sounds as if it could come down in pace. Half the difference would be a nice middle ground. I sped up *Little Jo* a little to 130 BPM and sped *A Summer's Day* half way through, after an initial time shift, to 175 BPM. I found the need to re-sync the transition between *A Summer's Day* and *Now It's All Gonna Change*. I did notice the guitar does not come in strongly on *Now It's All Gonna Change* and might need to drop some of the doubled guitars. *Now It's All Gonna Change* sounded fast so I have reduced it to 175 BPM with *The Most Kissable Lips* coming straight in— not a hard transition. *Now It's All Gonna Change* requires no bass at the front mix-break as per the mix rules. First breakdown seems to stop the flow of the track. Not sure about the bass at the front of *Asteroid B-612,* great line but the track might be stronger with just the guitar chords. I burnt a copy and listened to it in a different environment. All seems good; the mix is labelled Mix 20111021 and will need to be compared to the prototype 20110818. The track is now 25 minutes 36 seconds.

Date: 24:10:11. *Brisbane Records*

The missing toms on *Get Lucky* could not be located. I remixed the track with the vocal down and the guitar up labelled 20111011. I shortened the mix-break to one minute—30 seconds with guitar and 30 seconds with drums only. It was then bounced out as a 24 bit, 48 kHz for DJ mixing. I reduced the mix-break on *Little Jo,* raised the guitar a little and added a lead fill. I then deleted the bass guitar at the beginning of the track and recorded over the first mix. I also cleared some digital clicks that were a result of editing. In *Asteroid B-612* I replaced the bass-line with the straight version as it suited *Get Lucky* better.

I deleted the bass at the head and inserted reverse feedback to indicate the drop. In *A Summer's Day* I left a breakdown at the front and deleted the bass. The track can now come in at both breakdowns. I raised the guitars and dropped the vocal in the mix. *The Most Kissable Lips* comes straight in on the guitar. I deleted the breakdown after the first verse and muted the bass after the keyboard at the end of *The Most Kissable Lips*. I still could have more lead fills at the end. I ended up replacing the previous mix. For *Now It's All Gonna Change* I shortened the intro and took the bass out of the intro.

Title		**BPM**	**Tempo**	**% Deviation**
Little Jo		BPM 118	BPM 129.80	+110 % faster
A Summer's Day		BPM 164	BPM 167	+104.24 % faster
Now It's All Gonna Change		BPM 167	BPM 167	+100 %
The Most Kissable Lips	intro	BPM 167	BPM 193	-86.53 slower
The Most Kissable Lips		BPM 193	BPM 193	100%
The Most Kissable Lips	outro	BPM 193	BPM 185	-95.85% slower
Asteroid B-612		BPM 185	BPM 185	-100%
Get Lucky		BPM 173	BPM 185	+ 106.94% faster

I put the start of *The Most Kissable Lips* down to 167 BPM from 193 BPM and let it change after the first breakdown. Time compression totally destroyed the low level material in *The Most Kissable Lips.* This was replaced by the original at normal speed. The drum fill is to be removed before the first breakdown on *The Most Kissable Lips*. I butted *The Most Kissable Lips* to the end of *Now It's All Gonna Change*—no mix-break used. *Asteroid B-612* was louder than the others and reduced on the set mix. I finished the mix at 5 PM and let it bounce unattended.

Date: 28:10:11. *Brisbane Records*

I remixed all the tracks after listening to them in the car and taking notes. They were all bounced out for the DJs to mix. Chris Fletcher will visit Wednesday and we will agree on format and mix options next week. I will interview him in relation to the project and book Gasworks to check the mixes there. After recording all the mixes, I put them into a mastering session to create a set. I aim to preview all the tracks and manually select the tempi.

Title		**BPM**	**Tempo**	**% Deviation**
Little Jo		BPM 118	BPM 129.80	110 %
A Summer's Day		BPM 164	BPM 172	104.88 %
Now It's All Gonna Change		BPM 167	BPM 172	102.99 %
*The Most Kissable Lips**	intro	BPM 195	BPM 172	88.21%
The Most Kissable Lips		BPM 193	BPM 195	101.04%
*The Most Kissable Lips**	outro	BPM 195	BPM 187	95.90%
Asteroid B-612		BPM 185	BPM 187	101.08 %
Get Lucky		BPM 173	BPM 187	108.09%

*These tracks will sound better being processed from the original file not the processed file. I tried mixing the tracks into a set and found that I need to take the front off *Now It's All Gonna Change* and return to the original format. I had it coming hard out of *A Summer's Day* like the original demo. I found that the transition did not work between *Asteroid B-612* and *Get Lucky* on playback. It would be good to delete the guitar at the end of *Asteroid B-612* and have only the keyboard. This mix was bounced down the mix as Mix 20111028.

Date: 29:10:11. *Brisbane Records*

I remixed *Asteroid B-612* and bounced what I could describe as the first complete mix of the project. This has been done on schedule being within October—labelled Mix 20111029. I referenced Mix 20111029 in the car and made notes as usual. In Mix 20111029 I missed the drums leading into *A Summer's Day* and came in with a guitar build. The lead break in *Now It's All Gonna Change* could come up a little especially the double stops. A double stop is when you play two notes together on the guitar. The line "I got a fox" in *Asteroid B-612* sounded loud compared to other verses and this verse needs to be checked. *Get Lucky* has the click of the kick drum audible and indicates a technical fault. The beater wore through the gaffer tape covering the coin on the bass drum and we did not replace it. I hope to fix the problem but a remix might be in store for this track.

Date: 31:10:11. *Brisbane Records*

I remixed *Get Lucky*. On *Now It's All Gonna Change* I found the feedback a little loud but did not adjust it in this session. On the mix of the set I only vari-sped the front of *Get Lucky* and left it at the original played tempo. I am slowly backing off the vari-speed to keep free of digital artefacts. I spent a little more time matching the levels on the compilation mix and it gelled a lot better. I find the breakdowns suffer from vari-speed artefacts more than fuller program material. I am planning to reduce artefacts by replacing the breakdowns with original material so that the breakdowns will have a tempo reduction as well. On *Now It's All Gonna Change* the vocal has a little too much high frequency and it is noticeable when it first comes in. No problem through the rest of the track. Found a stray beat in the break-down before the bass returns in *Asteroid B-612*. I do not mind it but it is very strange. It turned out to be the spill from the backing track in the headphones. I am still very happy with the music-to-voice level and the way it upsets traditional formatting and leaves me wondering what is going to happen next. Not totally sure how it does this though, the use of odd number bars and variation probably have a lot to do with it. *Get Lucky* sits well in the new compilation of the tracks if not a little loud in the bounce—track labelled Mix 20111031. I do not feel the track could have been much longer without straining the attention span of most people. I noticed that *Never Mind the Bollocks* is 38:30 and Van Halen's first album is 35:34. Both of these albums have been used for reference. This last compilation comes in at 39:09. The tempo change at the introduction of *Get Lucky* I find pleasing. A small lift in tempo could pull the track together a little and I will do a version that does just that. I ended up moving *Get Lucky* from 173 BPM to 180 BPM a speed of 104.5%.

Title		**BPM**	**Tempo**	**% Deviation**
Little Jo		BPM 118	BPM 129.80	110 %
A Summer's Day		BPM 164	BPM 172	104.88 %
Now It's All Gonna Change		BPM 167	BPM 172	102.99 %
*The Most Kissable Lips**	intro	BPM 195	BPM 172	88.21%
The Most Kissable Lips		BPM 193	BPM 195	101.04%
*The Most Kissable Lips**	outro	BPM 195	BPM 187	95.90%
Asteroid B-612		BPM 185	BPM 187	101.08 %
Get Lucky		BPM 173	BPM 187	108.09% intro
Get Lucky		BPM 173	BPM 180	104.05%

*These tracks will sound better being processed from the original file not the processed file. At some stage after the write up I will import all the tracks as multiple mono tracks possibly at 96 KHz and export the set as a 24 bit, 48 KHz audio file. I will need to test the mix before going to too much elaboration. I will also include original processing on the two breaks stated above.

3.13 November 2011

Date: 04:11:11. *Gasworks Studios*

Composer/Singer: Chris Fletcher

Chris Fletcher came down and we went into Gasworks Studio to check the bass on the new mixes. They needed a bit of work except *Little Jo*. *Little Jo* needs the lead-break to have some warmth. We changed music-to-voice in *The Most Kissable Lips* and *Now It's All Gonna Change*. I was very happy with *Little Jo* and I will look to this track for a reference particularly in respect to the drums. Christo was down from Stanthorpe and we recorded the vocals on *Now It's All Gonna Change*. We recorded a main vocal and doubled it twice, then we dropped these in the mix either side of Christo's main vocal to give it space. When you took the main vocal out there was a nice place with the same frequency band for the vocal to sit without making out the vocal line. With the vocal in, it sometimes gave the impression of a tight delay. We experimented with percussion today and a lot of the ideas worked and we just felt that we needed someone professional to play them. The Stooges' first album was referenced and we were impressed with the extra percussion used in the production. We also noticed the low level of guitars in the mix. In *The Most Kissable Lips* we recorded two vocal lines to compliment the original and this worked well. *Get Lucky* was treated with the same doubled vocal and worked well. I started running out of tracks with the Pro Tools LE system but I should be able to get through. If not I will bounce down some stems. We looked at the mix of *Get Lucky*, *The Most Kissable Lips* and *Now It's All Gonna Change* and they all have been improved markedly. I had brought the drums up on *The Most Kissable Lips* and *Now It's All Gonna Change* over the last couple of days and they seem to be working better. Before the next bounce I would like to extend the mixes by one verse on the front. The vocals are introduced too quickly presently. If I want to mix the intro of the song I require just drums on the outro of the previous. This should work if I have enough drums to cover the first blank verse I aim to include. The bass or whatever at the end of the song can blend with the new song coming up before the vocals.

The aim is to increase mix-break time to better demonstrate the new sound. I also noticed that engineering got in the way of producing and looking after the performer, this was mainly in setting up. While recording, the fast reaction time required for dropping-in and other technicalities was better. I am due to work with Tim on Friday and we will finish the work parts in that session. The mixing stage seems to be taking a long time. If it works in the end I am not concerned. Giving the DJs work parts that are not finished has been a problem and if I get a really good mix that is not included in the set I will be disappointed.

Date: 24:11:2011. *Brisbane Records*

Engineer: Tim Whiteman

I refined the mix on *Now It's All Gonna Change* and checked *The Most Kissable Lips* which sounded good. Today we recorded guitar chords and lifted the breakdown level of *Now It's All Gonna Change*. We then worked on the formats for Tim to mix. *Now It's All Gonna Change* was extended at the front to allow a blank verse and the guitars were faded at the end to allow the drums to fade up. This fitted with *The Most Kissable Lips*. We worked in order of tracks to see how they worked together. *A Summer's Day's* mix-breaks were originally working well but now we have to mute the track to allow drums to carry on through *Now It's All Gonna Change*. It has become apparent that we are tailoring these tracks to fit precisely into the Rock album. It appears a new mix rule has materialised—that the mix-break will have 30 seconds of drums and 30 seconds of tonality. It will be better in the future to use bars instead of time and this will equate to 32 bars of drums and 32 bars of tonality. Mix rules revised:

- Each mix-break will be 64 bars long, 32 bars of tonality and 32 bars of drums.
- No bass lines are to be included in the front mix-break
- Mix-break drums need to be tight in regards to the sound

The last preparation for the DJ set was to lock the mix-breaks to the tempo grid so that they did not drift when the DJ beatmatched them. All tracks are ready to be beatmatched. *The Most Kissable Lips* could have a longer intro. I need to check the outro vocals for music-to-voice. Vocals could come up a little but the first vocal line seems right.

Now It's All Gonna Change has a stop before tonality comes in at the beginning. Tim said he will use this to cut and bring back the other track dramatically. The breakdown is working but could use doubled guitars.

3.14 December 2011

Date: 02:12:2011*. Brisbane Records*

I made adjustments to the mixes and bounced out a new version of each song. All the above problems have been addressed. *Now It's All Gonna Change* has doubled guitars in the breakdown. I started using the Auratones closer and this has been effective but fatiguing. From long hours in the studio I developed severe hypersensitivity to sound. This condition (hyperacusis) has abated dramatically but listening to narrow range audio still causes ear fatigue.

Using the Auratones is very effective in creating a universal mix—a mix that sounds good on all systems. You still need to use larger monitors to balance the high frequencies and the low frequencies because the narrow-bandwidth of the Auratones does not reproduce these frequency bands. Creating a strong balance in the mid-range is what creates the mix that sounds good in the car, portable systems and on large systems. It is worth spending the time creating a mix that works in the mid-range and if possible in mono. These will translate best in the world around us. The mono reference will give us a representation of the total energy of the mix.

I have listed the key signatures of the songs below because this will be useful when doing the mix this week.

Title	**Key**	**BPM**	**Solo Key**
The Most Kissable Lips	E min	BPM 193	F# min
Now It's All Gonna Change	B min	BPM 167	
A Summer's Day	C Maj	BPM 164	
Asteroid B-612	B min	BPM 185	
Little Jo	E min	BPM 118	D min
Get Lucky	Ab min	BPM 173	Db min

Date: 07:12:2011. *Brisbane Records*

Engineer: Alex Smith

The Ableton Live session went really well and we were able to morph the mix-breaks to a tempo grid and we left the main section of the song unaffected. We recorded a DJ set at 24 bit, 48 kHz and this sounded very good. Ableton Live gave the songs a lift in the bottom end but it was not unpleasant. I have individual morphed tracks, a session file and a DJ set. The set played through the songs from slowest to fastest and Ableton was able to change the tempo of both songs on the fly so that they could blend in tempo as they beat-mixed. This was very convenient and very effective. It represented one final mix of the project. I feel pretty comfortable with the mixes at the moment. It was a really good feeling to be locked into a mix.

Date: 08:12:2011. *Brisbane Records*

Engineer: Tim Whiteman

Tim came over to do a Traktor mix and we needed to work the set out from scratch. Before he came I put a mix-break on *The Most Kissable Lips* and referenced it to *Highway to Hell*—AC/DC and reduced the overheads, this made an appreciable difference. When mixing we had trouble with the end of *Asteroid B-612* not being in time and imported a morphed Ableton Live version. The transition between *Get Lucky* and *Now It's All Gonna Change* took some working out to make it sound right.

Title	**Start cue**	**BPM**	**Tempo**
Little Jo	NA	BPM 118	9% faster
A Summer's Day	5:34	BPM 164	BPM 175
Now It's All Gonna Change	6:18	BPM 167	BPM 175
Asteroid B-612	5:10	BPM 185	BPM 185
Get Lucky	4:67	BPM 173	BPM 185
The Most Kissable Lips	5:18	BPM 193	BPM 193

The replay from the hard disc sounded good with the new algorithms. I will still need to have a critical listen in the studio. *A Summer's Day* into *Now It's All Gonna Change* will need the blank bar of cut-down drums for an introduction. *Now It's All Gonna Change* sounded a little fast at 175 BPM.

The change from *Now It's All Gonna Change* to *Asteroid B-612* worked well, I still have reservations about having a breakdown right at the front of *Asteroid B-612*—it seems a bit of a letdown. This break-down could be a good place to get the BPM up for *Asteroid B-612* to enable *Now It's All Gonna Change* to have a more reasonable tempo. All the mixes sound really good—through ears plugs. Tim is monitoring the mix loud to create the feel he needs. Listening to *Get Lucky* I found that I could replace Dan's syncopated drums fills with straight time to firm it up a little. I checked the Traktor recorded file with the original from Pro Tools and it did not sound too bad, both were then in 16 bit, 44.1 kHz format.

The level of *Now It's All Gonna Change* came in a little low. Tim rectified this on the fly but I will need to fix it up later. I recorded all the level changes so I do not need to master them before they go into Traktor. Some artefacts could have occurred on the breakdown just before the lead-break. *Now It's All Gonna Change* is at a BPM of 174 and might need to be reduced at little. *Asteroid B-612* had its tempo reinstated at the first breakdown before the verse feel enters.

Title	**Start cue**	**BPM**	**Tempo**	**Gain**	**Speed**
Little Jo	NA	BPM 118	9% faster	unity	
A Summer's Day	5:34	BPM 164	BPM 175	unity	+6.6
Now It's All Gonna Change	5:18	BPM 167	BPM 175	+3	+4.7
Asteroid B-612	5:09	BPM 185	BPM 185	+2.2	-5.5→0.0
Get Lucky	4:57	BPM 173	BPM 185	+2	+6.9
The Most Kissable Lips	NA	BPM 193	BPM 193	+5	-4.2

We checked all the gains and have them mapped out so we will have a clean run on level. It sounded like Tim mixed *A Summer's Day* on the first mix-break rather than the second but I did not mind the change at all. It is a good thing that these changes are possible as they create a variety that is refreshing. This is even more pronounced when you are listening to the mix over and over again as we are in the studio chasing the perfect set. Artefacts could be present before the lead-break in *Now It's All Gonna Change*. *Asteroid B-612* is being mixed off the Ableton Live version. A splice is needed on the mix between *Get Lucky* and *The Most Kissable Lips*. To be spliced at 'seriously consider the fact'. The set runs for 27:25.

Tim's mix notes:

> *Now It's All Gonna Change*—remember there is a 1-2-3-4 kick drum count at the end of the mix-break, be mixed out of *A Summer's Day* by then and cut it before they start. EQ mix *Get Lucky* to *The Most Kissable Lips*, remember to come in at 4:57 for about 4 bars then drop it when *Get Lucky* breaks, after which you will have to slow *The Most Kissable Lips* down half a beat to have it in time with *Get Lucky* when the mix break comes back in.

Generally the live DJ mixes started at a level and got louder as the set progressed. This was understandable because I could not imagine the move from one song to the next getting softer. This did necessitate the need to level out the recording after the set was finished. This would not be a problem in the live environment when a slight rise in level would be perceived as generally good for the audience.

Date: 19:12:2011. *Josh Jett's Home*

DJ: Josh Jett

I delivered the session to Josh and went through the transitions of the set. This was done on Serato (DJ software) to map out the plan, then to be recorded through Traktor. I interviewed Josh and he gave valuable insight into the project as a whole. I left them to produce the final master tape.

Title	**Start cue**	**BPM**	**Tempo**	**% Deviation**
Little Jo	NA	BPM 118	BPM 124.87	Not recorded
A Summer's Day	5:34	BPM 164	BPM 175	+6.6
Now It's All Gonna Change	5:18	BPM 167	BPM 175	+4.7 → 5.6
Get Lucky	4:57	BPM 173	BPM 185	1.9 → +6.9
Asteroid B-612	5:29	BPM 185	BPM 185	0.0
The Most Kissable Lips	NA	BPM 193	BPM 193	-4.2 → 0.0

The set was recorded in order of tempi. I picked up the set and listened to it the next day. The first two songs were louder than the rest of the set but that is not a big deal. The transition between *Get Lucky* and *Asteroid B-612* worked well but the other transitions sounded as if they faded in and the work we did in the audition did not materialise as a master recording. The sound of the set is good at 16 bit, 44.1 kHz.

Date: 21:12:2011. *Brisbane Records*

DJ: Tim Whiteman

I videotaped the performance for reference. The mix-break out of *Asteroid B-612* is working very well, especially the kick pattern. I had to ensure that all EQ was out on the mixer path and the tracks sounded fine after that.

Title	**Start cue**	**BPM**	**Tempo**	**% Deviation**
Little Jo	NA	BPM 118		
A Summer's Day	5:34	BPM 164	BPM 175	+6.6
Now It's All Gonna Change	5:18	BPM 167	BPM 175	+4.7 → 5.6
Get Lucky	4:57	BPM 173	BPM 185	1.9 → +6.9
(EQ out low-mids)				
Asteroid B-612	5:29	BPM 185	BPM 185	0.0
The Most Kissable Lips	NA	BPM 193	BPM 193	-4.2 → 0.0

Mix Note: Start *The Most Kissable Lips* on the third transient, i.e. the first snare hit—on the offbeat.

3.15 January 2012

Date: 10:01:2012. *Brisbane Records*

Engineer: Tim Whiteman

Recorded Simon Faulkner's vocals on *Get Lucky, A Summer's Day* and *Asteroid B-612*. I recorded the other songs on the second of January. On the sixth of January I mixed all tracks with Tim Whiteman. These mixes will need to be checked at Gasworks Studios for the bass frequency balance. I utilised the computer speaker as a comparator and it worked really well. Most mixes have a big kick drum and I felt as if this made an improvement to the feel of the music. I spent a day on the seventh and ninth of January making adjustments to the mix after making a page of fine adjustments to make after hearing it in the van. On the tenth I spent a day at Gasworks Studios and finished at 1 AM the next morning. I referenced to *Back in Black* and this gave a nice bass lift. I made a few different mixes mainly with alternate bass levels. I did change the music-to-voice on *Now It's All Gonna Change* and this was a mistake on large monitors.

Date: 11:01:2012. *Brisbane Records*

Engineer: Tim Whiteman

Monique brought her CDJs1000 Mk3s and DJM-800 mixer over. The CDJs artefacts were quite noticeable and we switched to Traktor. Even a pitch shift of 1.35% on the CDJ made the bass warble on *A Summer's Day.* The CDJs only worked from CD and could not take any external memory. This would have accommodated a higher bit rate. The opportunity was available to hire CD2000s but I did not trust the device to produce pitch shift without artefacts. To facilitate the 48 kHz mix I will edit one in Pro Tools. In Traktor we started to slow down the next song for the mix-break and then bring it up to speed in the first breakdown. This worked really well.

Song	**Next Track Start**	**% Deviation**
Little Jo	NA	+2
A Summer's Day	5:34	+4.2
Now It's All Gonna Change	5:18	+2.4
Get Lucky	4:57	+2
Asteroid B-612	5:29	0.0
The Most Kissable Lips	NA	0.0

I thought Traktor put in a nice mid-range boost at the time of recording the set. We used Simon's vocal version of *Asteroid B-612*. I will now be refining the mix and I will ultimately be doing a Pro Tools edited DJ set. This will keep the master as a 24 bit, 48 kHz. The individual 24 bit, 48 kHz tracks will be bounced as multiple mono tracks into a 96 kHz session for mixing to give a better tone on the Digidesign 002 system. Importing them into another 48 kHz session has previously produced a rather harsh result in the past. This was discovered when mastering Jimmy Watts which was recorded during this project.

I have a recording session with Chris Fletcher on the twenty-sixth of January and will track harmony lines to complement Simon's lead vocal. We will also look at inserting a high-pass filter on Christo's vocal and making it a little more defined. It is possible that I might be able to fit a mastering session in before the end of the month. I am thinking about supplying a data disc for submission. This would contain the tracks with mix-breaks and a number of DJ sets.

It is noted here that the DJ set to date did not demonstrate the sound of the tracks at a close tempo which was demonstrated in earlier DJ sets. The album mix will need to be assessed by a number of professionals and band members before I would be confident to call it a finished product.

3.16 February 2012

Date: 03:02:2012. *Brisbane Records*

I listened to the set with Dan Sugars in Studio 4 at JMC and noticed that the vocal of *Now It's All Gonna Change* was too loud. Dan suggested reducing the high frequencies on the guitar to give the vocal some room. The next day I tried this and it worked really well. I also fixed the vocal level on *Now It's All Gonna Change* and bounced it out as multiple mono tracks for Pro Tools. *Now It's All Gonna Change's* higher vocal level sounded good in some environments. Chris Fletcher mentions that his vocal was not cutting through enough and we rolled off a little bass. On the thirtieth I recorded Christo's backing vocals over Simon's lead vocal. I remixed all the tracks checking Christo's lead vocals. On the thirty-first at Gasworks Studios I imported all the songs into a 24 bit, 96 kHz session and vari-sped the mix-breaks. I even slowed *A Summer's Day* and beatmatched this with *Little Jo*. The whole session was then vari-sped by 102.99%. The mastering was done with the use of a BF-3A on each channel and a L2 on the master channel. 400 Hz was taken out of the overall mix and the level was usually over 12dB RMS. I used the original non vari-sped material on all low level information and this eradicated the digital artefacts. I could vari-speed the whole set in one process. On the mix-break between *Asteroid B-612* and *The Most Kissable Lips* I manually aligned the drumbeats because the track was not tight enough. I bounced out the tracks as individual files and I will need to redo this as I had one click on CD playback. I was able to rectify this by crossing them at the 0dB point. The recording translated well in the car. On the third of February I recorded Justine's vocals on *A Summer's Day* and *Get Lucky*. The tracks will be remixed and this time I will bounce out a full-length track before cutting it up into individual tracks. Vari-speed can also be done at this stage.

Date: 27:02:2012. *Brisbane Records*

I remixed *The Most Kissable Lips* and *Get Lucky* at Brisbane Records before going to Gasworks Studios for mastering. I was trying to get volume out of the recording without it sounding too squashed. I also produced a version without processing for commercial mastering. The vari-speed is now on the whole mix after beat-mixing and bounced without limiting.

The low level information is replaced with the non-vari-sped original to eliminate artefacts. This bounced version is mastered and divided into individual tracks for the final CD. The mixes were refined and the result was played on as many systems to check the stability of the mix.

3.17 March 2012

Date: 21:03:2012. *Brisbane Records*

Having taken advice from various mastering engineers I reduced the 'gnarl' out of the guitars and brought up the bass in the tracks. This gave more room for the vocals. I also found that the guitars are slightly too dirty for the tracks. This was first realised on the second recording session and the project would be advantaged if the rhythm guitar was re-recorded.

Date: 27:03:2012. *Brisbane Records*

I bounced all the final mixes out last night and found that importing a bounce back into Pro Tools caused an unwanted lift in the high-midrange. The process is to bounce the individual mixes as multiple mono, 24 bit, 48 kHz tracks. These tracks are imported into a 96 kHz, 24 bit session to create a beat-mixed ClubRock set (the higher sample rate was chosen to minimise this lift in the high-mid frequencies). This multi-track session is bounced out (96 kHz, 24 bit, multiple mono) and imported into another session of the same sample rate to enable vari-speed over the ClubRock set. Only the sections at normal volume are varisped leaving any low level material unprocessed as artefacts are audible on these quiet sections. The amount of varispeed applied to the set is 101%. This whole process is a little complicated and attention to data integrity is needed. The last three tracks on the submitted version have the original 48 kHz, 24 bit, multiple mono tracks imported and spliced between the mix-break to retain a more natural representation.

3.18 September 2012

Date: 27:09:2012. *JMC Academy Brisbane*

Work was done in-between the last journal entry but it was on this date that production was back into full swing after a break. I set the guitar sound up in studio 4 at JMC. We used the second AWA Bar 2 preamplifier on the newer model with an input setting of nine. The Marshall guitar amplifier settings were Volume 1, Reverb 2, Presence 3, Bass 6, Middle 3, Treble 4 and of Gain 10.

The cleaning up of the guitar sound created a dramatic change. It uncovered the lead guitar's tone and now other sounds could be heard more clearly. The masking effect of the distortion on the demo guitar has been removed to unveil more of the track.

3.19 November 2012

Date: 09:11:2012. *JMC Academy Brisbane*

After finishing the guitar on *The Most Kissable Lips* it was discovered that it was recorded on the wrong take. I set the guitars in the existing mixes and found that the guitar sound on *The Most Kissable Lips* was a little smoother than the first redo. We used the third preamp on the older AWA. *The Most Kissable Lips* after adjusting the mix was still not as tight in the low end and I will need to spend time on this. Other corrections include a lead line on *Little Jo* missing, half the arrow effect on *Little Jo* could be checked to see if all the components are playing, the lead sound on *Little Jo* could be confined as it has a little too much room presently, the vocals on *Get Lucky* sounded dull and quiet but have high sibilance, the first build on *A Summer's Day* needs a fade in, I also need to check the highs on the guitar on *A Summer's Day* but the vocal level is good. The monitor level at JMC was set at a comfortable level. I had the Event Opals, Monitor Ones, Auratones and cassette player to work with. I still did not nail *The Most Kissable Lips* though. All others tracks fit together quite well. I have an idea that I could start *Little Jo* at the first breakdown at the end of *The Most Kissable Lips*. This will ensure that the CD ends strongly. Christo is down on Wednesday so I can check the mixes with him.

Date: 11:11:2012. *JMC Academy Brisbane*

I found that the work I had done on Friday was bass heavy. The track sounded dull. I went in on Saturday around 1.30pm to fix this track and to make some minor adjustments on the others. I brought in some reference CDs to help tailor the bass frequencies. Matching the CD reference was a little difficult because the CD was louder. I will need to set up the dbx compressor next session to match the level difference. I completed a balance but found that the sub-bass was incorrect. It made the track sound very tight. I found this frequency range very difficult to read. Part of the problem is in the near field monitors and the absence of soffit mounted loudspeakers. I am confident I can create the bass because the drum kit was recorded from the same session as was the bass guitar. The kick was recorded extra tight so the bass frequencies on the kick drum were manufactured through EQ. It might be possible to copy the EQ settings from another song and to use them on *The Most Kissable Lips*.

This song had been remixed at JMC so I will need to analyse what happened in all the other songs to know how to proceed. When the tracks are monitored in the car the problem is clearly defined. The other tracks of the album have a decisive punch to the kick and the bass guitar fills an area of the spectrum. *The Most Kissable Lips* is tight and does not fit the sound aesthetic. I found the sub area of the spectrum still difficult to read. I remember having a similar problem mixing the other tracks originally. The low frequencies were very subtle and the process was difficult. Finding a way of processing this information easily would be advantageous. This could be done by over emphasising the frequency range and aligning the program with a suitable reference. The punch or weight and the balance I have in *The Most Kissable Lips* is workable. The last mix I did I bypassed the EQ on the guitars and this made them surprisingly impacting. I am yet to determine if I can use them without EQ in the final mix. The frequency bands around the vocal could impede the vocal tone and the low end could also interfere with the bass guitar. Even a little EQ made the comparison between EQ and bypass stark and it could be a phase problem with the processing. The extended time it has taken to be examined has given me time to re-record the guitars and remix the compositions. The project still needs to be made into a DJ set and I have been reviewing this. I am not happy with the transition between *Little Jo* and *A Summer's Day*, two of the stronger songs. I had the idea that I might be able to transition *Little Jo* after *The Most Kissable Lips* at the end for a stronger finish. This might not use a mix-break but would be useful and would bring the set to a slower pace to finish. I will have to see if the change of pace will work.

Date: 13:11:2012. *JMC Academy Brisbane*

Last night I attempted fixing the bass frequencies on *The Most Kissable Lips*. I copied the EQ settings from *Little Jo* and copied sections of *Little Jo* and *A Summer's Day* as references. I listened to it in the car at home and it was right. I went into work after dinner and bounced all the tracks to the DJ set and put *Little Jo* at the end, it worked. I need to level the songs and consider if the first guitars are better on *Little Jo*. These were done at Brisbane Records and are firmer than the second session but not as firm as the last guitars we recorded with the AWA. The mix with the new guitars makes the elements really defined and it reminds me of Fleetwood Mac's *Rumour* which I have used as a reference from time to time. The masking of the old guitars has presented a nice track underneath. I checked the sub-bass by routing the mix just into the sub and checked it against the reference material. I made adjustments until the track sat with the others. It turned out not to be that hard.

Date: 15:11:2012. *JMC Academy Brisbane*

I had a listen in the car with Christo. It seemed like *Get Lucky* needed the most work. Christo was happy with the new order and new guitar sound. I need to bring the break in *Little Jo* up just a touch. I will try one new and one old guitar on *A Summer's Day*. I hope to make these adjustments before Christo leaves on Monday. The project seems in control since the sub-bass has been sorted on *The Most Kissable Lips*. The recent mix is the best we have had on that song. *Get Lucky* needs to be more stringently referenced to *Black in Black.* After work I had a look at *Get Lucky* and lowering the guitars and vocals made the balance a lot better. The vocals still feel as if they need more room but I will fix this tomorrow. I will meet Christo at JMC tomorrow and we will fine-tune the mix on *Get Lucky*. I have found reference to vari-speed of 101-103% in this Lab Book so I can decide tomorrow. Having finished tracks to work with will be an advantage and will give us the opportunity to enter the post-mixing section of the project. Little changes in the mix take a lot of work to materialise into a demonstration just to be changed again. I am probably the closest I have been. The submitted CD is a good reference for what I am doing at the moment.

Date: 17:11:2012. *JMC Academy Brisbane*

Yesterday I mixed *Get Lucky* with Christo. After we imported *Get Lucky* into the edited set it was found that the vocals were lower in comparison to other tracks but this still could be satisfactory. I made a version to import as a saved ProTools session. It was good to work with Christo mainly for confirmation. I need to check *Now It's All Gonna Change* for the verse without the riff. The solo in *Little Jo* was not sitting right with regard to treble and level. The guitar needs to be turned down at the start of *Little Jo*. Generally we are very close. The monitoring environment was working well. I have learnt a lot about mixing and recording by having the length of time on the project which I can apply directly to other projects. I have learnt a lot about masking, referencing and balancing.

One aspect of referencing I find interesting is selecting a reference that is not usual, if in only a small way. The *Back in Black* reference with the kick and snare really forward is not usual for my treatment of guitar heavy alternative music. This created a unique effect for my production. Stooges and other artistes have done it but not in the same way or the same balance. I was very pleased to hear *The Most Kissable Lips* sit so well with the other tracks. It is the track that needed to be remixed from scratch and it worked out really well.

Date: 18:11:2012. *JMC Academy Brisbane*
It might be advantageous once the mixes have been completed to re-vari-speed the current mix-breaks and replace the mix-breaks with those from the original mix. There is a fair amount of work if this is to be accomplished. The transitions will need to be reviewed and checked before the stereo master file is compiled and bounced at 96 kHz, 24 bit.

A mix of the Boondall Boys tracks on CD would be a bonus. These could be played at the end of the CD so that they do not run on from the *Manarays* Album. I will need to mix these tracks first and be happy with the result and how they are represented in relation to the album project. This would also make the Lab Book more relevant in the sections pertaining to the Boondall Boys recordings. These Boondall Boys recordings have a different guitar heavy feel and as such would stand out from the other recordings and could detract from the impression of an album from the same band.

Date: 19:11:2012. *JMC Academy Brisbane*
The mix-breaks are losing effectiveness through being old versions. This has been brought about because of the large amount of editing that was required and the application of pitch shifting to match the tempo of the mix-break. To reduce the editing involved in demonstration the mix-break section was recycled so that the new mix could just be inserted. The ramifications are that the sound has changed and I have a mix of old and new material. This will need to be rectified when the final pre-master is prepared. The existing edited tracks of the mix-breaks are a real benefit for placement of new mixes. This enables the fast interchange and audition of tracks before making the demonstration master. The editing information needed to fix the mix-breaks follows:

Title	Mix-break	BPM	% Deviation (Mix-break)
A Summer's Day	NA	BPM 164	NA
Now It's All Gonna Change	BPM 164	BPM 167	98.2%
Get Lucky	BPM 167	BPM 173	96.53%
Asteroid B-612	BPM 173	BPM 185	93.51%
The Most Kissable Lips	BPM 185	BPM 193	95.85%
Little Jo	BPM 118	NA	

This information is used to slow down the mix-break of the next song to match the tempo of the previous one until it can be reinstated at a convenient point. This continues until *Little Jo* comes in at the end. *Little Jo* does not use a mix-break but comes in hard on the tail of *The Most Kissable Lips*. *A Summer's Day* does not need vari-speed because *Now It's All Gonna Change* will adjust to it. The mix-break will be slowed down to match the previous tempo. Because the original song is at full level the audio artefacts of the mix-break are not that noticeable. When the track returns to the original tempo it will be at a faster pace to build the excitement of the set. This change over usually happens at a breakdown but could just be spliced into the faster original at a convenient time. The previous song would have to be finished or there would be a timing clash.

Now It's all Gonna Change has also come to be a highlight being the guitar track. Having *Little Jo* at the end of the set is a major improvement as is starting with *A Summer's Day*. The pace change at the end works really well to create relief from the ever climbing tempi change. It gives the set a wind down and then it finishes with the long reverb delayed end. A DJ could recreate the set I have created by speeding down the mix-break in the monitor mix and crossing over the tracks and releasing the vari-speed to fasten the track in the breakdown or mid-track. This DJ set is different from a normal DJ set because the DJ would have tracks of a very similar tempo which makes it easier to DJ. What needs to be pointed out is that the different tempi create a different sound to the standard DJ set. Generally the new mixes work better than the old fuzzy guitar tracks. I will send a demo CD to Christo tomorrow and get his feedback before I finalise too much. The CD is just short of 30 minutes and I have lost some time not having a mix-break on the intro of *A Summer's Day*. This is not a bad outcome as it makes the presentation more compact and hard hitting.

Date: 20:11:2012. *JMC Academy Brisbane*

I remixed *Get Lucky* and turned the vocals up. I also found a lot of snare reverb that masked the lower middle area I was having trouble with. I learnt from Bob Katz that Protools calculates at 48 bit precision and truncates to 24 bit. On this mix I applied dither to retain some of this extra information. I noticed that *Get Lucky* has a premixed mix-break so there would be no point remixing this on the compiled master. I will need to check the other songs but I recall that *A Summer's Day* is the same. These mix-breaks were done at Gasworks Studios as stereo analogue drum tracks.

On the second of November I was able to present my research at two conferences. The Griffith University Postgraduate Symposium at their Gold Coast Campus called 'Border, Boundaries, Transgressions' and QUT Creative Industries IGNITE12! 'Crossing the Line'. What I found through delivery of the research is that the rewards of the research are in compositional diversity. This is in contrast to the function of beat-mixing that create the diversity. I look back and wonder if the weight of my paper was more on the process and not on discovery. It was very rewarding to be able to present at both seminars.

Date: 24:11:2012. *JMC Academy Brisbane*

Last night I bounced a mix of each track. I listened to the tracks with headphones and removed all the digital tics I could find. I adjusted the pans slightly on some tracks. The guitar panned hard left and right worked well on all tracks. I made a mix with the break on *Now It's All Gonna Change* a little louder. Christo has not heard the new stop on this track. All tracks used the L2 for 24 bit dither and in some cases this replaced the compressor that was initially on the master. I am keen to replace the mix-breaks with the new tracks—this means vari-speed and editing. Listening on headphones was an important step, it allowed me to adjust the noise floor and fade outs and clean the starts of instruments. The artefacts were not audible through speakers. The tracks were sitting well on all speakers at JMC and I am still keen to check the mixes at Gasworks Studios mainly for bass consistency. I will need to talk to the Mastering Engineer Dominic McGlinn about what format to use. I am hoping that I will not notice any compression and still have a reasonable level but the dynamics are more important than level on disc. All tracks are at - 3dBfs and I will mix these somewhere under 0dBfs in the rock set. Dominic might have some preference as far as headroom goes, I will need to chase up the artwork, the liner notes and barcode. First step is the master.

If the opportunity arises it would be nice to put the Nord Hammond simulation recorded on the album through the Leslie speaker. This would be picked up through microphones in the studio and should create nice movement between the speakers. It would be a good addition to the download version if I do not get time.

Date: 27:11:2012. *JMC Academy Brisbane*

Received some good feedback from Christo today and I should be able to implement most of it.

> Hi Adrian, Jus and I listened to the CD last night and we both agree that it's an excellent balance as far as guitars, vocals, snare, cymbals & keyboards. The blending of backups with lead vocals is generally very good.
>
> 1. The bass guitar is a little hard to define; we think the kick drum is dominating the bass in terms of frequency range. A simple solution could be to bring the kick down just a tad so the bass has more room (also, it wouldn't hurt to give the bass more definition in itself as its sound is a little fluffy). Interestingly, the bass has the best definition in *Little Jo*—is the kick lower in that track?
>
> 2. I'm wondering if you've sped the tracks up at all? I think the whole album could be improved by being a bit faster (especially *A Summer's Day*).
>
> 3. A couple of minor points about the vocals: If I were mixing them I would bring Sly down at the end of *A Summer's Day*. His track is at a good level throughout the song until the last few bars when he seems to jump forward. His is backing vocal and, I believe, should remain in the background throughout.
>
> 4. In *The Most Kissable Lips* my vocal seems a tad lower than in all the other songs.
>
> 5. This last point is more about an artistic decision than a "mixing" so it's really up to you as the producer but in *Little Jo* I would push Sly's vocal in the chorus to the back and bring mine back as the lead.
>
> All in all a very good mix, the only thing that really stands out is the lack of definition in the bass guitar.

The bass is contributing greatly to the mix at the moment but it is felt rather than heard and without re-recording the bass this might be the best way to have it. I will try to uncover the bass from the kick but the EQ is the driver for the bass drum. I do like how it is the note of the kick drum. It is taking up most of the energy of the whole track at the moment.

All the other comments should be able to be implemented. I made all the corrections I could for Christo. The bass is under debate and eventually it was decided to re-record the bass. I wanted the bass to have its own place in the mix, a pocket of its own. This was not totally achieved in the end product but working towards this end really helped the mix come together. It took me some time to relax about the bass level generally and let it hang out a little. Generally I like my recordings to be fairly tight in the bass but I wanted to be a little more relaxed on this production.

3.20 December 2012

Date: 16:12:2012. *JMC Academy Brisbane*

I recorded bass guitar with Phil Dunlea with Clinton Bell engineering. We got through three of the six songs, *Asteroid B-612, Get Lucky* and *The Most Kissable Lips* and it is possible that we will do the other tracks after Christmas. I used my Eminence speaker cabinet with the large speaker providing most of the weight in the room. The 10" speakers were a good size for the mid-range. Phil brought his 12" with a horn and the combination sounded good in the room. Phil's amplifier used a crossover which was an advantage for capturing the individual frequency bands. We used an MD421 on the 10", an SM57 on the 12" and another MD421 on the 15-inch speaker.

At first we felt the original bass sounded better. This was evaluated when I was in the producer position and when I engineered after Clinton left I heard some well defined transparent bass that was not there in the original. We worked from 1.30 to 6 PM and Clinton left at 5 PM. Overall I am pleased with the project and look forward to being able to feed the keyboards into the Leslie cabinet and recording it in stereo.

Date: 18:12:2012. *JMC Academy Brisbane*

I stayed at work after hours while the family was down the coast. I edited the bass and sat the bass in the mix. I found I could bring the bass up a little on *A Summer's Day* and *Now It's All Gonna Change. Little Jo* seemed right. *The Most Kissable Lips* and *Get Lucky* still needs a little mixing and I had to replace the kick sound to sit with the bass guitar. I recorded the mono Hammond organ through the Leslie and it produced a very organic sound. The rotor noise added to the nostalgia. The tracks that will benefit most are *A Summer's Day* and *Asteroid B-612.*

Date: 23:12:2012. *JMC Academy Brisbane*

Contemplating on the difficulty of getting the bass tight to the reference I thought that if I use a bell curve instead of a shelf I would be able to move the bass out of the muddy areas and retain the warmth on the track. A high pass filter still would be used but it would be a lot lower, possibly as low as twenty Hertz in some cases. What I have been doing in the last mixes with the new bass is high passing the mid microphone and DI and then leaving the low frequencies and mixing in these separately. This has improved the ability at arriving at a good bass level while still keeping the low frequencies.

Leading on from the last point all references handle the loudness function on a domestic amplifier. My submitted master did the same and it sounded better with the loudness function on. The new method would have to have the same outcome. I could also use a calibrated reference level of 85dB to keep the reference in an even loudness contour. I have not used the sound meter in the project thus far. The bass guitar creates warmth in the track and this is needed to reduce ear fatigue. On previous productions I feel I have been a little bass light as I have always been a little safe when it comes to the low frequencies even choosing tracks like George Thorogood and the Destroyers *Bad to the Bone* as a reference. It is important for me to have the bass contoured right in the final mix.

Date: 28:12:2012. *JMC Academy Brisbane*

I made some adjustment to lead instruments in *Little Jo* and *A Summer's Day*. When lead instruments stick out in the mix it takes the weight out of the vocal when it returns and also detracts from a tight overall balance. To check this I listen to the vocal entry after the instrumental break. Jet (my wife) commented that she liked the rough old mixes and that it sounded too clean and produced now. My next project will be the opposite of refined and will be more about the feel and energy. I sent a CD to Christo to let him know where I am up to with the project. So far I have received good feedback from Christo. I made some notes from the car myself and will implement these soon. *Asteroid B-612* needed more bass and *Now It's All Gonna Change* had a bass hump around 100 Hz. I had a listen to the submitted master and it has a lot of attitude. The guitars are up and the bass supports the guitar. The mix on *Now It's All Gonna Change* and *The Most Kissable Lips* are not as strong as the others but overall it works well.

3.21 January 2013

Date: 08:01:2013. *JMC Academy Brisbane*

I had a look at all the mixes and they all benefited by the new bass and being fatter in the bottom end. I had the impression that I do not want good individual sounds but sounds that fit well with the feel of the song. A good sound can detract from the overall if it does not complement the other instrumentation. I can start to feel the vibe of the record and how the songs should complement each other. They do not sound as clean as previous mixes but have a gel with the new bass and bass level. I played a couple of tracks off *Shack Your Money Maker* by the Black Crows; it is quite a warm sounding recording and a useful reference for loose bass.

Date: 09:01:2013. *JMC Academy Brisbane*

I had news today that I have been assigned a new examiner. I listened to the new bass tracks and found that the feel of the mix was a lot better on the old bass track. It appears that the second bass session did not provide as a good a bass sound as the first redo session.

Date: 11:01:2013. *JMC Academy Brisbane*

Pro Tools 10 was installed in the studio. All songs transferred over well. I bounced all the songs out and remixed *The Most Kissable Lips* and was able to get the vocal up a little. I also found that the delay compensation was off and the kick seemed to be flaming before I turned it on. We turned the delay compensation off during recording because of the latency that is introduced. I used Audio Suite Pitch Shift/Time Shift to adjust the tempo of the mix-breaks.

Date: 14:01:2013. *JMC Academy Brisbane*

I adjusted the music-to-voice on *The Most Kissable Lips* and took a little harshness out of the solo. The mix seems to be sitting pretty well now but I will need to re-import it into the edit session. I bounced a CD to get familiar with the tracks at home. I have only heard the tracks in the studio and need to experience them in the real world—referencing them on other speakers before I know I have it down. I made some changes after listening to the tracks in the car. I also opened up the bass on most of the tracks and I liked the low frequencies in *The Most Kissable Lips*.

The bass softens the guitars and gives the kick drum a companion. It is still close to the reference and it could be brought back in the mastering. I will check it holds together at home and Gasworks Studios.

Date: 15:01:2013. *JMC Academy Brisbane*

I converted the sessions to 32 bit floating point but I still have the Waves L2 with 24 bit dither presently. The initial reason for the dither was to convert Pro Tools internal 48 bit word to the 24 bit word by using 24 bit dither via the L2 on the master fader. With 32 bit floating I will send it as is. No audio difference was discernible with the change to 32 bit but it feels good and I adjusted the bass placement or checked it. I have started beat-mixing the set and some beats do not line up with the time compression and there could be a little error in the BPM calculations. I am manually placing the beats and this is sounding pretty good. I have booked the mastering session on the 31st of January.

Date: 16:01:2013. *JMC Academy Brisbane*

I checked the editing and adjusted the fades in and out of the mix-breaks. The mixes sounded fine and I did not notice anything needing to be changed. I bounced the set out onto a CD and then bounced a 32 bit floating point file and vari-sped the set by 103% and then bounced that out as a 44.1 kHz file for CD. I have these two mixes to review at home. After listening to the CD I thought that *Asteroid B-612* was a little bass light and possibly *Get Lucky*. *The Most Kissable Lips* had a good full low frequency content that was right out of the way of the rest of the track. Some problems were found: the mix-breaks did not extend to the breakdown so you heard a tempo change and this was not a very good outcome. The tempo lift of 103% worked really well to pick-up the feel of the whole. I could see the completed CD and the hardest part now is remixing for the bass and placing new mixes in the set.

Date: 17:01:2013. *JMC Academy Brisbane*

I edited all the songs into a set using Elastic Audio in Pro Tools and the end result was pleasing. It did not cut bass tones up very well but the drums parts worked. I accidentally elasticised the whole of *Get Lucky* and it turned out to produce a fast version and I was surprised of clarity of processing. I will need a more critical listen to determine if it can be used to vari-speed the set. I need now to work on the mix-breaks so they do not over power the songs. They are 3dB higher at the moment and I will need to mix down the song as the mix-break comes in to even up the levels.

This will be a fine balance. Before I edited the set I raised the bass in *Asteroid B-612* and slightly in *Get Lucky* and then turned the keyboards down in *A Summer's Day*, just small adjustments. I am only making small adjustments at this stage of the project. If any changes need to be made on individual tracks I can insert them into the set, negating the need to remix the mix-break. This is possible because it is rare now that I would need to adjust the rhythm section. It would be beneficial to compare the set with earlier versions but a lot has changed and I do not think any of the earlier versions would be better. Thanks to Dan Newstead at JMC the workflow has been improved with the addition of Elastic Audio.

Date: 18:01:2013. *JMC Academy Brisbane*

I was able to adjust the volume on the mix-breaks so that they sounded pretty good without filtering the bass frequencies to reduce the volume. Filtering the bass still could be a good device. I am fairly happy with the transitions and will review this next week. Once this is finalised I will need to vari-speed the whole set and work out the best way to do this. It might be possible to warp the whole set. I have room for two mixes on the CD and this has opened the opportunity to have an earlier demo, a faster version or a different DJ mix. This might be a tall order to fix within the time frame of the project but it is an interesting concept.

Date: 21:01:2013. *JMC Academy Brisbane*

I made two adjustments on individual tracks and imported them into the set. I bounced this out to check. I also tried a number of time shift plug-ins. Nothing really sounded good and the best option was warping all the tracks with a tempo change from the default 120 BPM to 122 BPM. This is less than the 103% but it felt a little better and increased the vibe of the record without it sounding rushed.

Date: 22:01:2013. *JMC Academy Brisbane*

I felt happy that I had a product. I had to remix *Asteroid B-612* because it did not have the right feel when I heard it with the other tracks. *The Most Kissable Lips* is still the weaker mix. I bounced it out and noticed that in *Asteroid B-612* the second bridge did not have Hammond organ so I copied the first and replaced it. I gave Alan and Jack (facilities JMC) a copy to take home to evaluate. My wife Jet listened to a previous mix in the car on this day and did not find any issues. I have decided not to vari-speed the whole as it produces artefacts that reduce the quality for very little gain.

Date: 23:01:2013. *JMC Academy Brisbane*

I bounced off a 32 bit floating point copy of the set. I also compressed and limited the track and bounced it out as a 44.1 kHz CD version and two MP3s, 180kB and 320kB. These last two were for distribution.

Date: 24:01:2013. *JMC Academy Brisbane*

I remixed *Asteroid B-612* for a break that was too loud and I listened to the mix-break coming out of *A Summer's Day* with Dan Newstead from JMC facilities and we decided that the overhead microphones or cymbals being loud when the two tracks combine was not a bad thing. These corrections were tabulated from listening in the car. I copied the sessions and brought them to Gasworks Studios. I found the bass inconsistent and that it did not have the tailored sound of the master used to submit my Masters. I decided that I will need to go to Gasworks Studios Monday, Tuesday and Wednesday from 8 PM to 11 PM to fix the problem. This is before the mastering session.

Date: 30:01:2013. *Gasworks Studios QUT*

I went to Gasworks Studios and aligned the bass to the reference. The process I found interesting. I first aligned the bass to the Barefoots not spending too much time on each track. I then listened on the Adam A7 and found the bass was up just a little -1 or 2dB. I adjusted this and then check the result on the Barefoots. The result was correct except in one instance. I felt comfortable that I had completed the job successfully.

The Pro Tools system turned the native EQs into TDM versions and the lead on *Little Jo* seemed nonexistent. I will need to check the files at JMC. I only took away the ptx files rather than the audio files and will check that the process works at JMC. Some of the top end could need lifting as a result of the increased bass but I have decided to leave this to mastering. Before the session I adjusted the bass on each track in the set in the compilation session and found it easily adjusted as a mix so I am confident of getting a good end result through the mastering process.

3.22 February 2013

Date: 01:02:2013. *JMC Academy Brisbane*

I played the mixes back today and found Pro Tools EQ has been disengaged. It still had the frequencies ready but they were not turned on. I had to check all mixes and re-equalise them and I still need to check *Little Jo*. This process allowed me to adjust the track to sit with the bass level. The tracks sound more like a band than single components now the bass is up. It is also a lot more fun to work with.

I received my examiner's results today and I have some major revision to do over the next month. From examiner's comments it is possible that I will put together a chronological compilation of ClubRock sets that demonstrate the research material. This would create the opportunity to demonstrate vari-speed even if it has artefacts. I would also consider a mix of the Boondall Boys tracks to demonstrate these as part of the project. Another inclusion could be a historical perspective of Rock music in relation to the project.

Date: 23:02:2013. *JMC Academy Brisbane*

I had done a couple of days mixing and evaluated it in other environments. The bass seemed too loud when I played it at JMC Sydney so I have gone half way and will leave it to the Mastering Engineer to adjust the level.

After spending time with the set I remixed *The Most Kissable Lips* as there was no kick in the small speakers. I bounced the set 20130223MIX after adjusting the clip gain. The only blemish is that you can hear the time compression at the start of *Asteroid B612*. All time compression was at the highest quality (X-form). I have realised that I will need the tracks with mix-breaks to be masted and the mix-breaks will need to be locked to the grid so DJs can use them easily. Today I will chop up the mix and give Dominic (Mastering Engineer at DOMC) the specific times that each track will start. I tried 103% time shift using X-form at two times. It took the length down from 29.50 minutes to 28.57 minutes. The processing sounded the best I have heard. It produced no audible artefacts. I chose to stay with the original because I felt it was making the music out of time slightly. Something that was more obvious with other algorithms and especially at higher values.

Mastering Notes:

Song one: *A Summer's Day*. The set starts with .100 second lead in.

Song two: *Now It's All Gonna Change* starts at 5:38.098 (.052 secs before the beat)

Song three: *Get Lucky* starts at 10:59.797 (.1 secs before the chord)

Song four: *Asteroid B-612* starts at 16:14.263 (end of previous chord .013 secs before start)

Song five: *The Most Kissable Lips* starts 21:39.625

Song six: *Little Jo* starts 25:05.761 (.038 secs before the beat, four bars before the song)

Leave fade at the end and all the clicks, pops, headphone bleed and the noises between chords in *Get Lucky*. If the album needs dynamics between tracks *Now It's All Gonna Change* and *The Most Kissable Lips* can be slightly lower level. I made mix-breaks for all the tracks that have been truncated. The breaks were duplicated so there is still work to be done locking them into the tempo grid. After checking all the mix-breaks it was decided that they were all tight enough to be bounced out ready to be mastered.

The level difference between tracks did not work on the first track. *The Most Kissable Lips* sounded too low. It felt that *The Most Kissable Lips* should be up and *Little Jo* down because it winds the set down. These level differences are supposed to be subtle but on the demo master they were noticeable especially *The Most Kissable Lips* being lower. It might be because I actually like that song whereas it used to be the odd one out. It has been decided to keep the level all flat although *Now It's All Gonna Change* feels right.

Date: 28:02:2013. *JMC Academy Brisbane*

I changed the music to voice on *The Most Kissable Lips* a couple of dB on the first verse. Recorded Slaughterhouse the night before and found Studio 4 really effective for recording vocals if done the right way. I had baffles and a foam surround around the U87. This dampening combined with the acoustic of the room worked really well. The room usually is a little too live.

3.23 March 2013

Date: 01:03:2013. *JMC Academy Brisbane*

I changed the music to voice on *The Most Kissable Lips* again today and burnt a CD. I had to adjust the music-to-voice level on the album version and the version with mix-breaks because I had saved them in separate sessions. If I had duplicated the material in the same session I could have copied and pasted the automation to the mix-break version. These workflow issues are very important and sometimes can create the need to redo a fair portion of work. In this project if I had duplicated the tracks before making the mix-break version I would have the ends available to make radio edits from the tracks. This is still possible but the guitars will sound different and I might have to manufacture some from breakdown finishes mid song.

Date: 08:03:2013. *JMC Academy Brisbane*

Last night the master was hand delivered to Dominic McGlinn and we spent some time mastering before I left the job for him to finish. The clicks were removed from *Get Lucky* and the top end was smoothed out. I was very happy with his projected outcomes for the final product. I just need to send him the versions with the mix-breaks so other mixes can be done by DJs.

Date: 09:03:2013. *JMC Academy Brisbane*

I had a listen to the demo master from DOMC. I had a problem between tracks one and two where the CD missed a beat. The equalisation is good and I will need to check this with my amplifier at JMC. *The Most Kissable Lips* sounded as if the bass was lower than the other tracks in the mix stage. The level of *The Most Kissable Lips* is a little lower than the song before and after and this could be a result of my direction. I have not had a good listen but it appears that the CD could do with 3dB more level. I am comparing the track to 80's CDs that all have good dynamics and are not pushed too loud. I do not think this is a hard objective. The CD does not need to be that much louder to be right. Overall I was happy with the master that I received. Commercial CDs have a midrange presence that cuts through at low volume and I feel this could advantageous for the CD. I still need to make a full report once in the studio. Now the bass is up this midrange boost will keep the recording present. *Little Jo* seems to have Christo a little lower and I wonder if I have missed an equaliser that was neutralised by the Gasworks Studios session. I will need to compare this to earlier versions.

Date: 11:03:2013. *JMC Academy Brisbane*

I listened to the master against imported CDs and the level seemed to stand up quite well to my general references. I am not acquainted with today's extra hot levels but this is not important. Black Crows was unexpectedly loud but did not withstand the loudness control. All other references and the demo master held up well with the loudness control. I was a little concerned with the presence on the first track *A Summer's Day* as Christo's vocal seemed to get lost in the track. I was happy overall.

Date: 11:03:2013. *JMC Academy Brisbane*

I brought Christo's vocal level up in *Little Jo* and remembered when this track was used for a reference for the album. I had to wonder if I have a better mix in the archive folders. I will need to check the vocal level adjustment but it should work out and equated to just over a decibel. I also compressed and added some reverb to the lead break in *Little Jo*. These were small adjustments and have only come about from analysing the demo master from DOMC. At the mastering session Dominic de-clicked *Get Lucky* and I thought it best to do this process in the mix. I found the overheads were the worst and this has improved the track. I am still to bounce out a master and send the mix-breaks to DOMC. These final adjustments will finish the first stage of the project and if there are any other adjustments they will be quite minor.

Date: 19:03:2013. *JMC Academy Brisbane*

I adjusted the mix on *Get Lucky* today and it feels a lot more consolidated. The kick drum has lost its click but it is a little full at the moment and I plan to bring this back in the next couple of days. I brightened Christo's vocals and the mix sounds more radio worthy than previous versions. Pro Tools started distorting playback but after a restart all was good again.

Date: 21:03:2013. *JMC Academy Brisbane*

I checked both remixes today and they both seemed good. I have booked QUT on Monday night next week to listen to the mix so I can deliver them on Thursday night to DOMC. I have my ISRC codes for the songs and talked to Dominic about the adjustments today. The midrange or presence boost would need to be small to be right.

Date: 21:03:2013. *JMC Academy Brisbane*

I bounced the tracks out today and found I needed to reduce the mid-range on Christo's vocals on *Get Lucky* and reduce the level of a line in *A Summer's Day*. I also low-passed the snare reverb on *A Summer's Day* because the reverb was sounding a little unnatural. These mixes were imported into the set and mixed ready for bouncing out.

3.24 April 2013

Date: 03:04:2013. *JMC Academy Brisbane*

I bounced all the files and made a set to listen to at home and in the car. Some of the mix-breaks sounded a bit rough especially *Little Jo* and *The Most Kissable Lips* but these are not important for mastering. It was discovered that the lead solo on *Little Jo* needed to come down slightly. I also listened to the set in mono on a small cassette player and discovered that the vocal level on *The Most Kissable Lips* was a little too loud in the first two verses. These observations will be corrected tomorrow and a master will be delivered to DOMC for mastering on Friday night.

Date: 04:04:2013. *JMC Academy Brisbane*

I remixed *Little Jo* and *The Most Kissable Lips* today and listened to it at home. I was successful with the music-to-voice on *Little Jo* but on *The Most Kissable Lips* the vocal was a little low. All verses are now equal but the level needs to come up just a little. I reduced it by 1.6dB today and that was a little too much. The number of test CDs produced for the project is up to fifty and a USB player in the car would be advantageous.

Date: 05:04:2013. *JMC Academy Brisbane*

I remixed *The Most Kissable Lips* and checked the music-to-voice level on the Marantz cassette player at work. It sounded right in the car and on the Hi-fi so now I am ready to master the album at DOMC. It has been frustrating that balance changes were needed to be made late in the project, but that is all part of the process. The mastering session went smoothly and the remixed tracks sound good and fitted into the album nicely. I left at 10.40 PM and I will be able to download the master tomorrow.

Date: 06:04:2013. *JMC Academy Brisbane*

Below are listed the International Standard Recording Codes for the individual songs on the album.
ISRC Codes:

A Summer's Day	AUNOB1304061
Now It's All Gonna Change	AUNOB1304062
Get Lucky	AUNOB1304063
Asteroid B-612	AUNOB1304064
The Most Kissable Lips	AUNOB1304065
Little Jo	AUNOB1304066

The master from DOMC turned out bass heavy and was deficient in the high frequencies. The tonal balance will be corrected next week and I will bring some reference songs including AC/DC's *Back in Black*. The album has some way to go; corrections on the master, pressing, publicity and a report on the reception of the project in the community—but this will be the last entry in this Lab Book.

4.0 Conclusion

This Lab Book has been very helpful in remembering and documenting the recording process. It was important to refer back to procedures that had to be repeated. It did not document the reflective journal which included insight into methodology and theory relating to the formulation of the study. The reflective journal turned out to be a bricolage of impressions, quotes, photocopies of sections of books marked depending on relevance, directives and reflections.

The final creative synthesis was quite pleasing artistically in the end. I listened to the recording with a strange fascination for the textual layers that were present in the final outcome. Recording over a two year period taught me a significant amount about the process of recording an album that I had not learnt in my thirty years experience to date.

One pleasing outcome is that *Now it's all Gonna Change* and *The Most Kissable Lips* found their own place in the set. Through the mixing stage these two songs were very messy and were difficult to mix compared to tighter songs like *Little Jo* and *A Summer's Day*. *Now It's All Gonna Change* was also difficult but came together a lot sooner than *The Most Kissable Lips*. *The Most Kissable Lips* did not really sound together until the very last stages and now it has turned out to be a personal favourite. This was a pleasant reward for all the hard work that went into that song as is documented in this Lab Book.

Some aspects were less pleasant and the most frustrating was the realisation that the final product would never be final. The project is still fluid and it seems that I have only touched on the possibilities that the recording has to offer. I had automated the levels of each track but was just looking at the possibilities of automating the equalisation when a version had to be released. If the fire keeps alive I will release a new mix as a new set for the second pressing and luckily I have produced an album that is designed to be reborn and rediscovered.

5.0Artwork

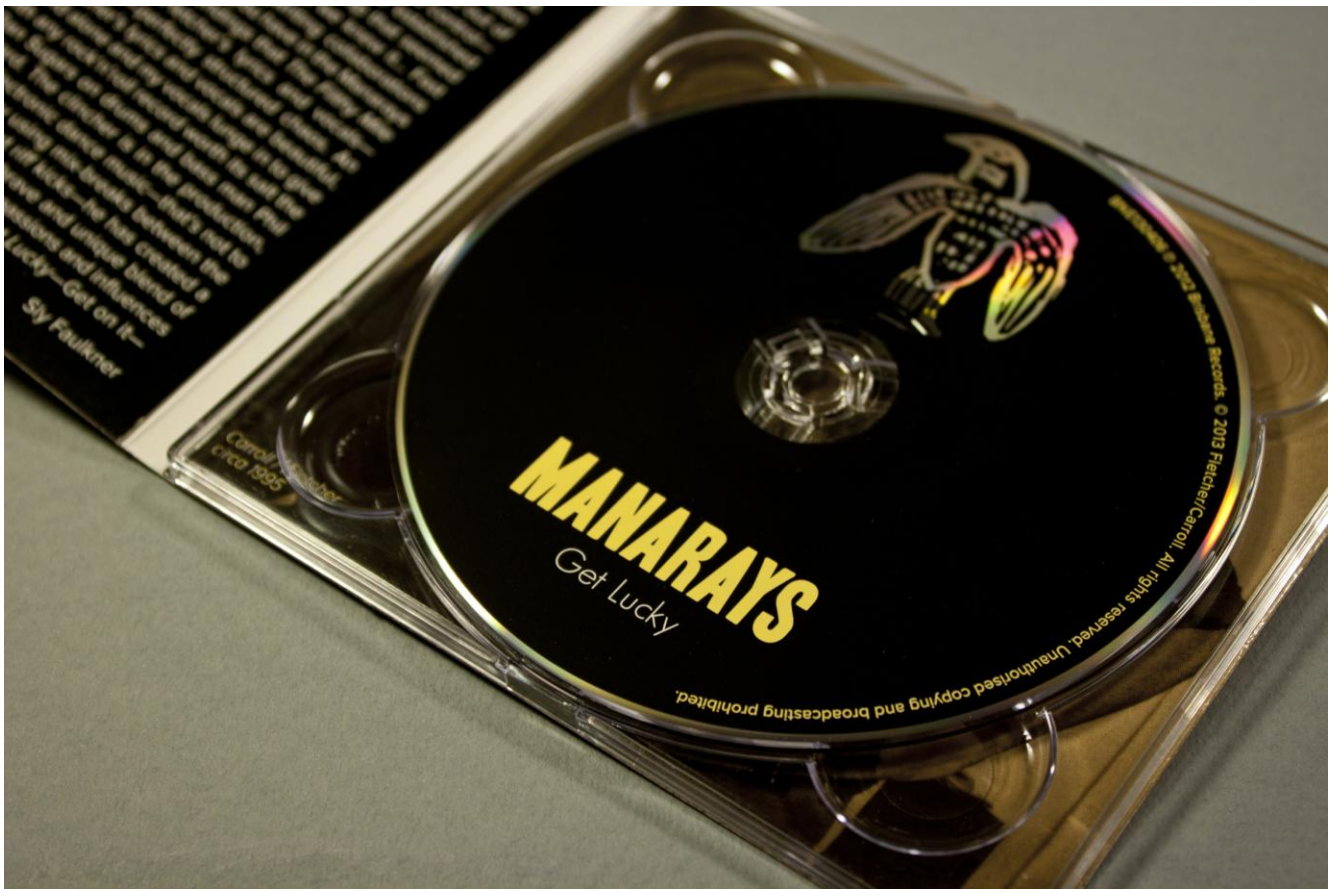
MANARAYS

Sydney circa 85-92, the undisputed Mecca of fiercely independent Aussie rock'n'roll—A pure punk ethic drove the DIY noise machine through Sydney streets like a stolen getaway car—a genuine music underworld, as prolific as it was diverse—it was out of this melee that The Lompoc County Splatterheads came crashing—beyond control—our first studio album, *The Filthy Mile*, a perfect storm fuelled by the established team, Carroll and Fletcher (and later myself)—a songwriting partnership that seemed as natural as the noise itself—it wasn't just a record—it was life as we knew it... Fast forward to now... Little known fact; Carroll and Fletchers songwriting collaborations have continued to the present—they are incurable—and what you have in the Manarays *Get Lucky*, is a record that burns a lot of the same nerve endings that *The Filthy Mile* album did—Carroll's riff heavy rock'n'roll fused with Fletcher's lyrics and vocals—heartfelt ambiguity—the uncontrollable pulse of life—perfectly structured chaos. An obvious maturity is realised in the Manarays—Fletcher's lyrics and vocals are beautiful, furious, uncontrived—Carroll's guitar work is stand alone and my vocals lunge in to give harmony and a sense of sweet fallibility. As with any rock'n'roll record worth its salt the rhythm section do a lot of the heavy lifting—Dan Sugars on drums and bass man Phil Dunlea—heavyweight rhythm pigs by any standard. The clincher is in the production, Carroll has taken techniques more often found in electronic dance music—that's not to say this isn't totally guitar driven rock'n'roll, it is—but by using mix-breaks between the main body of each song, the beat pumps on until the next riff kicks—he has created a nonstop, balls to the wall rock record—it is relentless—it's a brave and unique blend of genre production techniques—and it kicks—still unafraid to bare passions and influences like gaol tattoos, the Manarays come out swinging hard with *Get Lucky*—Get on it—

Sly Faulkner


Chris Fletcher | Vocals
Adrian Carroll | Guitars
Simon Faulkner | High Vocals
Phil Dunlea | Bass
Dan Sugars | Drums
David Kershaw | Keyboards
Justine Johnson | Backing Vocals
Carroll / Fletcher
circa 1995


MANARAYS
Summer's Day
Now It's All Gonna Change
Get Lucky
Asteroid B-612*
The Most Kissable Lips^
Little Jo
All songs are written by Adrian Carroll and Chris Fletcher *except a cover version of Asteroid B-612 by Sonic's Rendezvous Band written by Fred Smith. ^The Most Kissable Lips is dedicated to Fred 'Sonic' Smith from MC5 and late husband of Pattie Smith and was inspired by Electrophonic Tonic by SRB.
Produced and mixed by Adrian Carroll. Mastered by Dominic at DOMC.
Album artwork by Kenya Carroll.
BNE RECORDS


MANARAYS
Get Lucky
Sly Faulkner
Carroll
circa 1985
Fletcher
Records. © 2013 Fletcher/Carroll. All rights reserved. Unauthorized copying and broadcasting prohibited.